

**TIMURID CENTRAL ASIA AND MUGHAL INDIA:
Some Correlations Regarding Urban Design Concepts
and the Typology of the Muslim House**

by

Manu P. Sobti

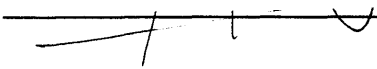
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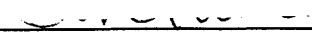
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ABSTRACT

This thesis commences with the basic premise that Timurid Central Asia (which included the regions of Khorasan and Transoxania), with its monumental achievements in Urban Planning and Civic Architecture, beginning with the reign of Tamerlane (1346 - 1405); served as a literal source of inspiration for the urban form of Mughal cities.

As an additional corollary to this premise, it puts forward the thesis that the formal similarities observed between the architecture of the Timurids and the Mughals were not purely coincidental; but were indeed the result of a conscious exchange of ideas and images in a varied number of ways. The Mughals seem to have essentially emulated the Timurids in terms of the basic grammar of their architectural creations, and the final product was always unique in terms of the extent, purity and the mix of constituent elements. This cross-cultural 'borrowing' seems to have become more direct and relatively refined when one considers developments in the realm of city planning; where to a large extent, there seems to have operated a 'stereo-typical' notion or model of the urban settlement - predominantly Timurid or deriving from Timurid precedents; which is thereafter applied and overlaid with 'Indianized' or 'Persianized' notions in order to develop the characteristics of the Mughal city.

The first part of the thesis examines how pre-Timurid precedents could have contributed towards the conception of a Timurid Urban Model. The characteristics this model and its variations are subsequently discussed with reference to specific cases.

The second part discusses correlations between the Timurid and Mughal city in terms of a matrix of political and social variables derived from conditions prevalent in Timurid and Mughal society.

The third part of the research looks at factors or agents which may have caused the this cultural interchange to occur between the two cultures.

Thesis Supervisor: Attilio Petruccioli
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Here I wish to acknowledge all the people who have made this thesis and research possible and worthwhile.

First and foremost my sincere thanks and gratitude to Attilio Petruccioli for his inspiration, guidance and comments on the work I was putting together in preparation for this thesis.

My appreciation for Nasser Rabbat and Stanford Anderson as critical readers who went beyond their capacities to help me structure my arguments; and to Gulru Necipoglu, who taught a wonderful course last semester at Harvard connected to the work I was interested in.

The basic need to investigate a phenomena such as this, and connect it to the larger frame of knowledge existing on cities in the Indian subcontinent was made aware to me by Kurula Varkey, whose contribution towards my present work extends beyond my stay at the MIT. This is perhaps the first stage of investigation in a project which has interested both of us for a long time now. I cannot thank him enough for how inspired I feel each time I discuss my research with him.

The thesis could not have been conceived without the opportunity provided by the Aga Khan Program to travel to Central Asia and complete a research project on house types in Samarqand and Bukhara in Summer 1994. My acknowledgments to Nematjan Sadikov and Anwar, who gave me an immense amount of help in Samarqand and Bukhara on this trip. A second measuring trip to India in Dec. 1994 seemed to substantiate some more arguments on the similar house types. Here I wish to thank Ashfaq Sheikh, IC, Savita Subherwal, Manzoor Ahtesham and Satyen Kumar, who were invaluable friends while I was in Ahmedabad or Bhopal. Special thanks to Renee Caso at the AKP for her cooperation.

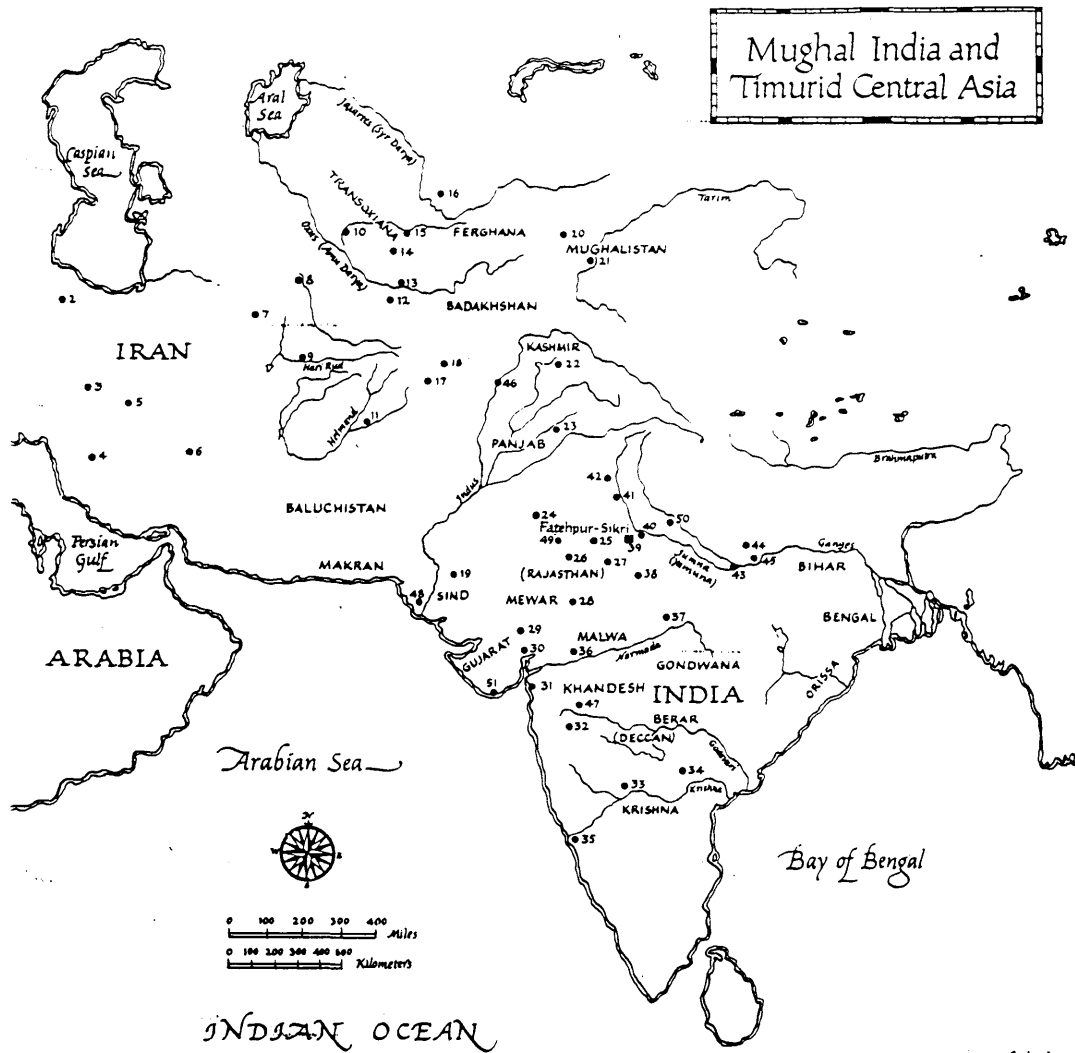
Finally of course has been the advice, discussion and solid help given by my close friends here in Cambridge—Pratap, Aparna and Arindam.



Fig. 1 Reconstruction of the head of Timur by Gerasimov

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|-------------|----------------------|-------------------|-------------------|-----------------------|
| 1 Tabriz | 12 Balkh | 22 Srinagar | 32 Ahmadnagar | 42 Panipat |
| 2 Qazvin | 13 Tirmiz | 23 Lahore | 33 Bijapur | 43 Allahabad |
| 3 Isfahan | 14 Kesh/Shahr-i Sabz | 24 Bikaner | 34 Hyderabad | 44 Jaunpur |
| 5 Yazd | 15 Samarqand | 25 Amber (Jaipur) | 35 Goa | 45 Varanasi (Banaras) |
| 6 Kirman | 16 Tashkent | 26 Ajmer | 36 Mandu | 46 Atak Banaras |
| 7 Mashhad | 17 Ghazni | 27 Ranthambhor | 37 Panna | 47 Daulatabad |
| 8 Marv | 18 Kabul | 28 Chittorgarh | 38 Gwalior | 48 Thatta |
| 9 Herat | 19 Umarkot | 29 Ahmadabad | 39 Fatehpur-Sikri | 49 Nagaur |
| 10 Bukhara | 20 Kasghar | 30 Cambay | 40 Agra | 50 Kanauj |
| 11 Qandahar | 21 Yarkhand | 31 Surat | 41 Delhi | 51 Diu |

Fig. 2 Map of Mughal India and Timurid Central Asia showing major cities.

INTRODUCTION

"This king Timur is one of the greatest and mightiest of kings. Some attribute to him knowledge, others attribute to him heresy because they note his preference for 'members of the House [of Ali],' still others attribute to him the employment of magic and sorcery, but in all this there is nothing; it is simply that he is highly intelligent and perspicacious, addicted to debate and argumentation about what he knows and also what he does not know."¹

So wrote Ibn Khaldun, the celebrated Arab historian who met Timur between 1401 and 1405, in the concise summation of this extremely complex personality. The powerful Turco-Mongol warlord had gathered inspiration from accounts of Chenggiz Khan's conquests, and was perceived at the beginning of the 15th century not only as his veritable equal, but as a figure of even greater power and magnificence in the medieval Islamic world.

The Timurids controlled extensive areas of Eastern Iran and Central Asia for much of the fifteenth century, inheriting the grandiose political and cultural aspirations initiated by their founder. [Figure 2] Their most significant achievement was the development of a unique, highly refined strain of urban civilization; effectively combining the indigenous culture of the nomadic steppe lands with the more material creations of Ilkhanid Iran. Such an innovative mix seems to have suited Timur (and his successors, in varying measures) well in his perpetual obsession to create objects, artifacts and buildings which created an image that would sustain his dynasty. Despite the continual diminution of the

¹. J. Walter Fischel, *Ibn Khaldun and Tamerlane*, Berkeley : University of California Press, 1952, pp. 47.

dynasty's power after Timur's death in 1405 AD., they were able to project an ever greater aura of cultural prestige. The success of such a policy depended on three important elements: the aggrandizement of Timur and his achievements; the incorporation of past literary and visual traditions into the dynasty's aesthetic vocabulary; and the supreme effort to form and codify a system of images that could be applied en masse to all methods of artistic production. Therefore, by the beginnings of the sixteenth century, even when the Timurids were rulers merely in name, they were perceived throughout the Islamic world as the ultimate models of urbane sophistication.²

Until the time the last of the Timurids was finally overthrown by the Uzbek Hordes in 1507 and the Shaibanid Khans of Bukhara, their efforts had given rise to the development of cities such as Samarqand, Bukhara, Shahr-i Sabz and Herat, all of which were endowed with incredible structures within a well-developed urban fabric. These were to become literal models for subsequent urban developments in the eastern Islamic world. Dynasties and ruling families even faintly connected to the prolific Timurids attempted to appropriate and extend on their cultural achievements. Most wished to be seen as their progeny; even the arrogant Muhammad Shaibani Khan, who ordered a portrait of himself in the costume of a Timurid prince, surrounded by the cultured paraphernalia synonymous of a refined, urban gentleman - ink pots, pens and books. "Let the Chaghatai [the Timurids] not call me an Uzbek," is what he stated to his poet laureate Muhammad Silah (d. 1536) in the Shaibaninama.³

The remaining descendants of the surviving Timurids - the Chaghataid Turks, still survived in certain parts of Central Asia (especially Ferghana), nurturing a festering ego ever since their dynasty had fallen into near oblivion. Babur's decisive victory over Ibrahim Lodi in the first battle at Panipat in 1526, immediately compensated for this status quo and raised his status to supreme ruler of substantial areas in northern India; thereby laying the foundations of the

2. Thomas W. Lentz and Glenn D. Lowry, "Timur and the Image of Power", in *Timur and the Princely Vision: Persian Art and Culture in the Fifteenth Century*, Smithsonian Institution Press, Washington, 1989, pp. 32 - 45.

3. Maria E. Subtelny, "Art and Politics in Early 16th Century Central Asia," *Central Asiatic Journal*, Vol. 27, Nos. 1 - 2, 1983, pp. 136 - 37.

Mughal empire⁴ over which his descendants would reign until 1739, and survive as sovereigns of Delhi until 1857. His descent from Chenggiz Khan on his maternal side, and from Timur (Tamerlane) on his paternal side, seemed to have been instrumental in the development of certain key attitudes on the eve of the Indian expedition. He explained his position in a moving speech to the members of his council shortly before setting off to conquer Hindustan:

“..... Strangers and ancient foes, such as Shaibaq [Shaibani] Khan and the Auzbeks, are in possession of all the countries once held by Timur Beg’s descendants; even where Turks and Chaghatais survive in corners and border-lands, they have all joined the Auzbeg, willingly or with aversion; one remains, I myself, in Kabul, the foe mightly strong, I very weak, with no means of making terms, no strength to oppose; that, in the presence of such power and potency, we had to think some place for ourselves and, at this crisis and in the crack of time there was, to put a wider space between us and the strong foemen; the choice lay between Badakhshan and Hindustan [India] and the decision must now be made.”⁵

After his decisive victory Babur did not see himself as the founder of an entirely new dynasty in India. Instead he viewed himself as the prince who had finally revived the ‘Timurid cause’ and had procured a throne for the illustrious and ancient ‘ruling house’ that had lost power. The importance of Babur for the revival of Timurid fortunes was even recognized by the great calligrapher Mir Ali, who honored him with the following verse:

My head is in the dust of the door of the Lord of the kingdom of letters,
The pride of the king of kingdoms, the honor of Timur’s family,
The sovereign of the virtuous, the sea of generosity, the mine of kindness,
The leader of talents, Shah Muhammad Babur.⁶

⁴. A Persian variation of the word Mongol, ‘Mughal’ was applied to the Timurids when they arrived in India because of their association with the Mongol traditions of Central Asia, but the term was used equally used by the Timurids to distinguish themselves from other Muslims in India. Timurid therefore is the correct name of the dynasty, Babur, the son of a petty Timurid ruler of Ferghana and though his mother was a descendant of Chaghatay Khan, never considered himself and his followers anything but Timurids. See also Marshall G. S. Hodgson, *The Venture of Islam: Vol. 3 (The Gunpowder Empires and Modern Times)*, Univ. of Chicago Press, Chicago, pp. 62.

⁵. Zahir ad-Din Muhammad Babur, *Baburnama*, tr. A. S. Beveridge, Oriental Books Reprint Corporation, New Delhi, 1972, pp. 340.

⁶. Qazi Ahmed, *Calligraphers and Painters*, tr. V. Minorsky, The Smithsonian Institution Press, Washington, 1959, pp. 128 - 29.

Significantly, long after Babur's death in 1530, and for at least two centuries after his invasion of Hindustan, the imperial court at Delhi seems to have maintained regular contact with the courts of Central Asia through the stream of soldiers, officials, scholars, artists, adventurers and refugees from north of the Hindu Kush who sought fame and wealth in India; while they toyed with the possibility of actually regaining their lost lands beyond the north-western frontiers, and not merely for a desire to return to their ancestral patrimony, as Babur and many of his nobles had felt in the early stages of their stay in India.⁷

Such a dream of conquest (or re-conquest) however never quite came near realization. The defense of the north-western frontiers against two such restless neighbors such as the Uzbeks and the Safavids, and the persistent fear that one day the Uzbeks might venture upon an invasion of India, necessitated Mughal control over the central Afghan massif while access to the trade-routes north of the Hindu Kush tapped the supply of fighting-men and horses which was a sine qua non for the survival of a foreign Muslim dynasty in India ruling a majority of alien Hindu subjects. Babur became fully occupied in consolidating his territories in northern India after his initial victories and was probably too shrewd to risk another encounter with 'Ubaydullah Shaibani, the prolific ruler of Herat. His son and the next Mughal regent, Humayun, barely managed to retain his father's kingdom, suffering exile for fifteen years in Safavid Persia, and eventually making a comeback to rule for just two more years before his accidental death in 1555.⁸ Akbar (1556 - 1605) was wholly preoccupied with his wars and administration in India, and during his reign the region of Mawarannahr was ruled by one of the greatest of the Shaibanids, 'Abdullah II (1583 - 98), who actually expelled Akbar's Timurid relatives from Badakhshan and Tukharistan, thereby tempting Akbar to initiate a confrontation.⁹ Indeed, Akbar is reputed to have remained in Northern India between 1585 and 1598. in expectation of an

⁷. Zahir ad-Din Muhammad Babur, *Ibid*, pp. 518 - 20.

⁸. W. A. Erskine, *History of India under the two first Sovereigns of the House of Taimur, Babur and Humayun*, Vol. 1 and 2, London, 1854. Also see R. C. Verma, "The Great Mughal and Transoxiana", *Islamic Quarterly*, 1955.

⁹. Akbar was however quite ambitious in terms of conquest in the Uzbek territories. See Marshall Hodgson, *Ibid*, pp. 63. "..... by 1585, Akbar had reasserted Timuri power in the northwestern mountains in the face of the continuing Ozbeg challenge, assuming direct control of Kabul (where for some time he had to allow a brother independent rule) and occupying Kashmir. By 1595, he had Quandhar, the remaining possession of Babur's in that area, which had been occupied by the Safavid; having come round to it by way of a conquest of Sind (and eventually Baluchistan)."



Fig. 3 Mughal Miniature—Trilogy of seated emperors: Akbar seated in center, Jahangir on left and Shahjahan on right (about 1620).

Fig. 4 Chenggiz Khan dividing his empire between his sons (Chenggiznama, 1596)

Uzbek attack upon Kabul and the Punjab.¹⁰ His son Jahangir was probably too indolent to have ever contemplated campaigning beyond his north-west frontier, but military glory had a strong appeal for Shah Jahan (1627 - 59), and it was in his reign that the 'Indian Timurids' in fact made their last attempt to regain any of their former possessions in Central Asia. The occupation of Balkh in 1646-7 ended in a disastrous failure and it is possible that when Shah Jahan's successor, Aurangzeb (1659 - 1707), a participant in this ruinous venture, turned his entire attention towards political acquisitions and expansions in the Deccan, it had wisely prevailed on him that any further campaigns into Central Asia would result only in greater loss of lives and a strain on the imperial treasury, howsoever vital lineage and dynastic pride may be.¹¹ [Figure 3]

The seeming inability to conquer these lands despite strong military and political efforts, could have acted as a strong precursor for Mughal emperors to pursue a policy of 'cultural borrowing' from their Central Asian origins all the more rigorously. Such an approach not only gave them a dynastic legitimacy, fragrant with the aura of the legendary Chenggizids, but also provided them with a ready-made set of traditions, practices, codes and institutions to sustain the formation and infrastructure of a growing empire.

The first significant attitude towards this direction was the delineation of a family genealogy, which seemed to perform two indispensable functions—the first of connecting or relating oneself to an illustrious forefather, and the second of gaining self-legitimacy in the eyes of the supporting nobility comprising of Khorasanian begs and military commanders, most of whom believed that such dynastic links were indispensable and that only descendants of Chenggiz Khan could attain sovereign power. as was the prevalent practice in fourteenth century Central Asia and Iran.¹² [Figure 4]

¹⁰. J. Briggs, History of the Rise of Mahomedan Power in India till the year AD 1812, Vol. 1 - 4, Calcutta, 1908 - 10; Vol. 2, pp. 276. Also see R. C. Verma, "Akbar and Abdullah Khan", Islamic Culture, 1947.

¹¹. R. C. Verma, "Mughal Imperialism in Transoxiana", Islamic Culture, 1948. B. P. Saxena, History of Shahjahan of Dihli, Allahabad, 1962, pp. 182 -209.

¹². Rita Joshi, The Afghan Nobility and The Mughals 1526 - 1707, Vikas Publishing House Pvt. Ltd., New Delhi, 1985, pp. 32 - 56; shows that a number of Afghan and Khorasanian nobles joined the Mughal forces in important positions. See also A. R. Khan, "Gradation of Nobility under Babur", in Islamic Culture, Vol. LX, No. 1/ Jan. 1986, pp 80.

The House of Timur

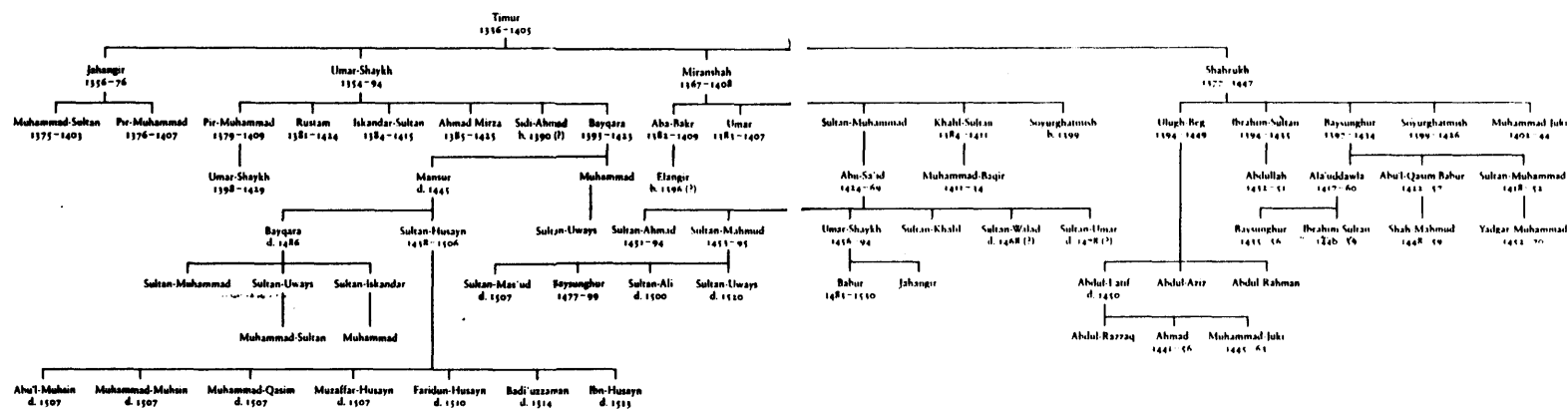


Fig. 5 Genealogical chart showing the important descendants of the house of Timur.

Though not Mongol himself, Timur himself had sought to enhance the legitimacy of his rule by assuming the mantle of the line of Chaghatai Khan, with whom he claimed kinship. He had adopted the title of Gurkan (son-in-law) in reference to his marriage to Tukul Khanum, whose father was directly related to Chaghatai Khan and additionally installed a puppet king from the Chaghataid clan on the throne. Quite appropriately therefore Babur, Humayun and Akbar saw themselves first and foremost as princes of the great house of Timur (1336 - 1405), who had conquered vast tracts of territory in Central Asia and even sacked Delhi in 1398. Additionally they traced their ancestry even further back to the Mongol warrior Chenggiz Khan (1167 - 1227), who had upon his death, divided his vast Mongol empire among his four sons, a crucial event later illustrated by Akbar's artists. Mughalistan (including the western Tarim Basin and Kashgar) and Transoxania were bestowed upon his second son Chaghatai Khan (d. 1242). When these two wings of dominion were split up late in the thirteenth century, Transoxania in the west became the scene of mass conversion to Islam and a great deal of intermarriage with Turkic tribes people before it eventually fell to Timur, a Barlas Turk. Timur's descendants had ruled Transoxania until they succumbed to the forces of the Shaibanid Turks in 1508- 9.

Akbar's attempts at 'creating' an illustrious ancestry is included in the official history of his reign written by Abul Fazl, his close companion. The opening chapters of the Akbarnama, though riddled with inconsistencies and exaggerated claims, delineate the emperor's family history as he wanted it to be seen. The myth of Alanquva and the divine light-ray that supposedly initiated the line of rulers beginning with the glorious Chenggiz, and passed through Timur, was borrowed and extended to include her Majesty Miryam-makani and Akbar himself, within its magical domain.¹³ [Figure 5]

Furthermore as if to complement this stand, this 'divine inspiration' seemed to guide the Mughals in structuring their socio-cultural character. Chaghatai Turkish - the original, preferred language of the Mughals since Babur; had begun to be superseded in the second half of the sixteenth century by Persian. Interestingly enough, Akbar's stand on this situation caused Abul Fazl to state that because of the filial connection of the dynasty through Timur to Chaghatai

¹³. Abul Fazl, Akbarnama, tr. H. Blochmann, Munshiram Manoharlal, New Delhi, Vol. 1, pp. 179.

Khan, Akbar's 'noble line' came to be named 'Chaghatai Mughal' (a Persian variation of the word 'Mongol')¹⁴; which is somewhat of a misnomer for Babur's dynasty, although the term was commonly used by the Mughals to distinguish themselves from the other Muslims in India such as the Afghans.

Akbar was also the first among the Mughal emperors who gave a concrete shape to his Timurid descent, in terms of architectural creations associated with the invention of an imperial ideology. In this respect the response to his heritage differed somewhat from that of Babur and Humayun. Unlike either of them, he was born in India and clearly thought of the subcontinent as his home (even while he was in exile in Kabul with his father Humayun). He seems to have adopted an attitude based on a combination of sources and emulated Amir Timur in toto. Badauni's description of the emperor towards this respect is significant:

"..... In this year [1579], the Emperor was anxious to unite in his person the spiritual as well as secular headships, for he held it to be an insufferable burden to be subordinate to anyone, as he had heard that the Prophet (God be gracious to him, and give him peace!) and his lawful successors, and some of the most powerful kings, as Amir Timur Cahibqiran and Mirza Ulugh Beg-i Gurgan, and several others had themselves read the khutba [the Friday sermon], he resolved to do the same, apparently in order to imitate their example."¹⁵

As the secular and religious head of the immense Mughal state, Akbar came into a capacity to initiate the development of the building arts to an extent perhaps equaling, if not exceeding Timur's precedent. They were the appropriate medium by means of which imperial power and authority of the legendary Timurids could be physically demonstrated to the masses. The primordial need to assert status and position, as an elitist minority within the vast diversified Indian territory consisting of numerous creeds and cultural sub-groups—now began to be fulfilled by the use of powerful remnants and vestiges of Timurid architectural traditions in new constructions. It is this subconscious and conscious emulation of the Timurid past in terms of its architectural-urban achievements, which made Mughal cities so similar to their Central Asian

¹⁴. Ibid, pp. 197 - 98.

¹⁵. Al-Badauni, *Muntakhab at-Tavarikh*, Renaissance Publishing House, Delhi, Vol. 2, pp. 276.

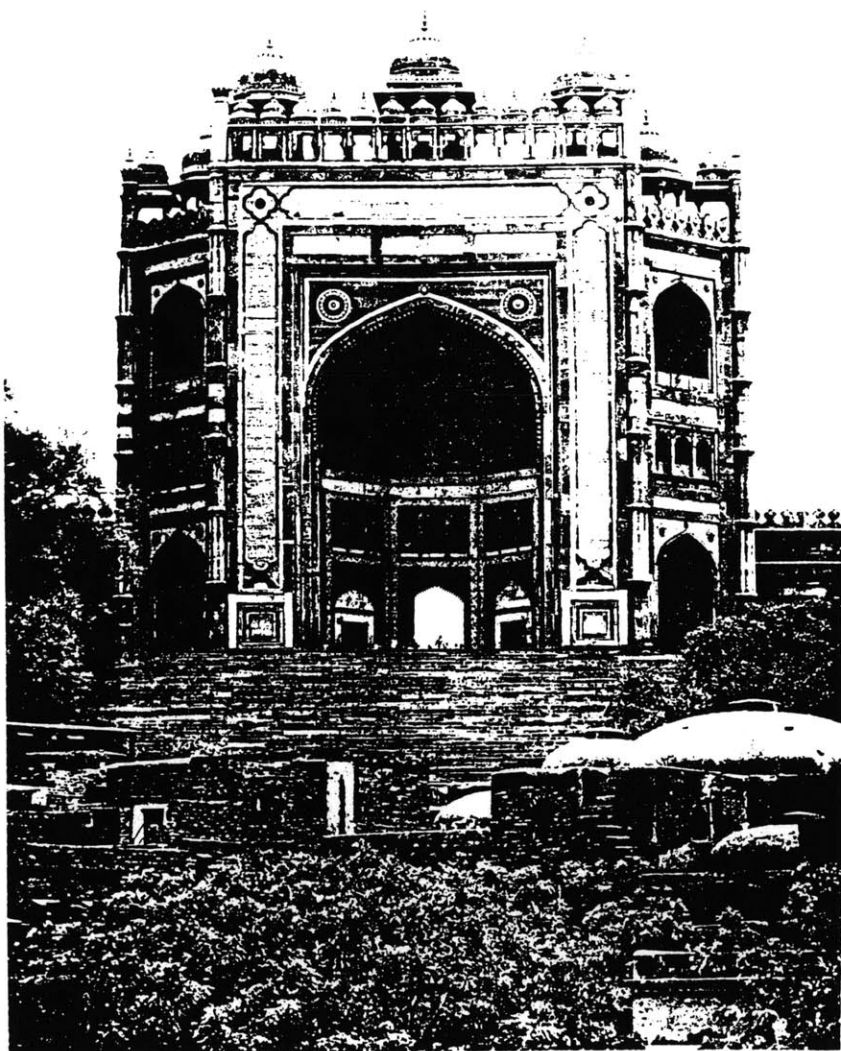


Fig. 6 The Buland Darwaza, the gateway to the Jama Masjid at Fatehpur Sikri.

precedents. The tools of urban planning, the layouts of spaces, and the types of buildings - their size, scale and building language; were largely similar if not the same. [Figure 6]

These imperial efforts at reinventing the images of the Timurid past was just one of the facets of this process. A relatively more profound change in the vocabulary of architectural and urban creations, was initiated by the non-aristocratic or common populace, whose migrations to urban centers caused whole new residential neighborhoods to be established within the city.

Intentions:

This basic premise that the Timurid city served as a source of inspiration for the urban form of the Mughal city, leads the author to commence the investigation by proposing the existence of a schematic urban model. This model possibly existed as an important component in the memory of migrating individuals or populations when they moved from one geographical locale to the other.

The first part of the thesis therefore examines how pre-Timurid precedents could have contributed towards the conception of the Timurid Urban Model by looking at examples of Mongol Dadu and Ilkhanid Sultaniyya. The characteristics of this model and its variations are subsequently discussed with reference to the specific cases of Samarqand, Shahr-i Sabz and Herat.

The second part discusses correlations evident between the Timurid and Mughal city in terms of a matrix of political and social variables derived from conditions prevalent in Timurid and Mughal society. Three formative aspects significant to the urban process are discussed here at length:

Nomadic versus Settled / Sedentary life.

The incorporation of elements of nature within the urban context. The royal encampment as the model for the urban settlement.

The subdivision of the city structure into three parts or zones —the Citadel (kohandaz, ark, qal'a), the City Proper (shahrestan, shahr-i khas or medina) and the Suburbs or rabad.

The delineation of the primary structure of the city by means of grand/ formal ensembles, in contrast to the more secondary structure relegated to the residential fabric.

The third part of the research looks at factors or agents which may have caused the this cultural interchange to occur between the two cultures. Three factors are subsequently discussed—

the first being the influence of the Mughal nobility, which comprised of the emperor and the amirs;

the second being the influx of architects, scholars and intellectuals traveling from one place to the other and serving in royal households;

and the third being the migrations or movements of large populations, related by means of common ethnicities, clan, guild or religious affiliation.

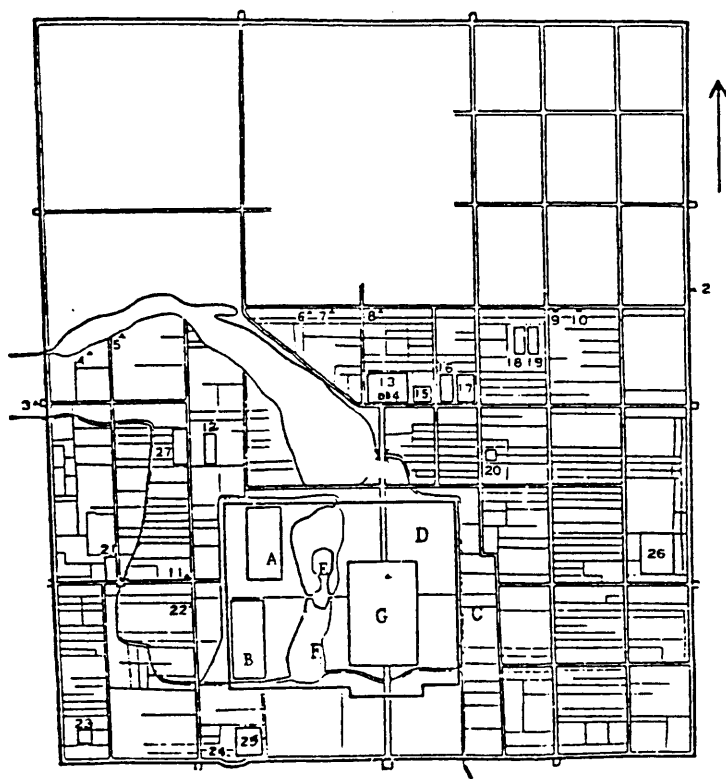


Fig. 7 The plan of the city of Dadu (about 1267).

1.0

THE TIMURID CITY: PRECEDENTS AND CHARACTERISTICS

1.1 Precedents to the Timurid City: Mongol Dadu and Ilkhanid Sultaniyya.

1.11 Mongol Dadu:

In the year 1267, Khubilai Khan, the fifth successor after Chenggiz Khan, established the imperial city of Dadu (present-day Beijing)¹⁶, perhaps the first capital ever built by the semi-nomadic Mongols within the territory of a sedentary culture such as the Chinese. Dadu was an important development for variety of reasons—firstly that it was the great capital of the entire Mongol empire. It encompassed within its domain an extremely large area stretching from the Qipchak Steppe and the Persian Gulf in the west, to the East China Sea and substantial parts of South-East Asia in the east, additionally including certain parts of Eastern Europe as well. Secondly that its design, layout and building represented the virtual culmination of the skills of literal armies of craftsmen and builders brought in from numerous conquered lands.¹⁷ And thirdly (perhaps most significantly) that in its plan and build it possibly adopted the first ever merger of nomadic with sedentarized traditions. [Figure 7]

¹⁶. Nancy Shatzman Steinhardt, "The Plan of Kubilai Khan's Imperial City", in *Ars Orientalis*, 1986, pp. 137 - 158. Interestingly, the city was known as Yanjing or Khanbaligh (Khan's city) in Mongolian, until the ninth moon of 1272 AD., when it became the 'great capital' or Dadu.

¹⁷. Ibid, pp. 137.

In terms of its physical structure, the city closely resembled the imperial Chinese city, which was in fact not unusual for a conquering race such as the Mongols. Khubilai had overthrown the pre-Mongol kingdom of the Jurchen people before controlling the Chinese mainland, and from their capital Zhongdu (central capital), seems to have borrowed the plan and symbolism for his new capital city, in the relative absence of a native Mongol imperial architectural tradition. The use of already established imperial forms surely provided a potent symbolism of legitimate rule for the great grandson of a Mongol Khan - the overwhelming architectural symbolism of the country that had historically been the largest, strongest and the most influential in East Asia.

Quite interestingly, two freshly evolved characteristics also appear here for the first time, awaiting conscious repetition later in the Ilkhanid and the Timurid city. The first of these is the conception of the city as a diagram of concentric enclosures. Therefore quite literally, Khubilai's city was a walled city within a walled city within a walled city. The unmistakable similarity to the tripartite subdivision of the later Ilkhan and Timurid city into citadel (kohandaz or ark), the town proper (shahrestan or Shahr-i Khas) and suburbs (rabad) exists here. The innermost enclosure in the composition was solely reserved for imperial and royal purposes, while the proceeding layers became successively more public in terms of their function and use. Significantly enough, as if to become a direct precedent for future developments, the imperial enclosure was a combination of pavilions and tents; and Khubilai would spend six months within the city and six on his incessant campaigns. Secondly, despite the rather relentless and disciplined imposition of a rectilinear grid plan of east-west and north-south streets which formed the organizational structure of the city, there existed an artificial, irregular water body, intentionally positioned within the city in a manner such that it divided the city into unequal eastern and western parts.¹⁸ The two aspects I am attempting to underline in this urban model are firstly—the concept of an imperial enclosure/ division within the larger perimeter of the urban walls so as to literally form a separate entity; and secondly a deliberate mediation of the urban plan and the cityscape with the more looser elements of nature. These two organizational devices are applied rather obsessively in the Ilkhanid and Timurid city in the 14th and 15th centuries. Chronological records

¹⁸. Ibid, pp. 138 - 147.

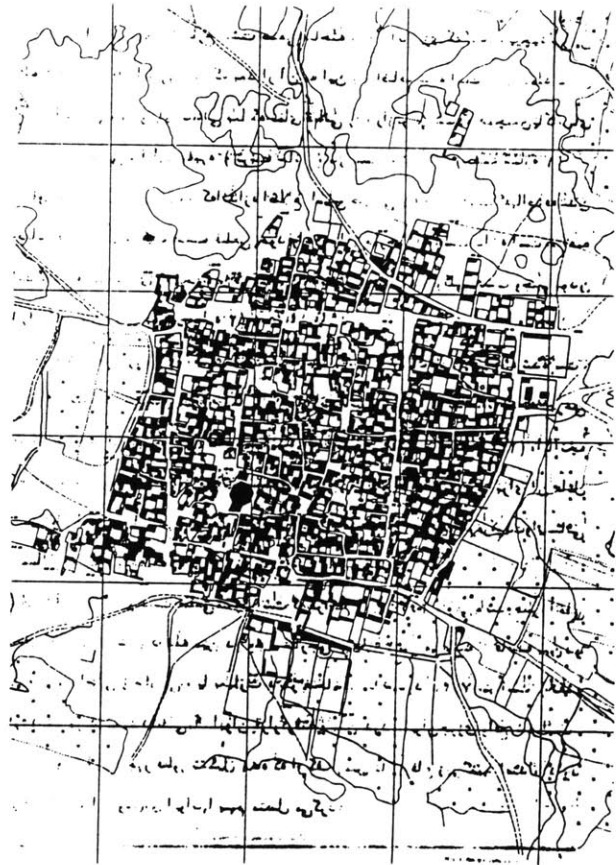


Fig. 8 Sketch showing the two basic principles of organization in the city of Dadu—The concept of concentric enclosures, and the mediation of elements of nature with the urban structure.

Fig. 9 Nomadic Caravanserai and Bazaar, Aqcha, North Afghanistan. Both institutions were indispensable for the Central Asian caravan trade.

Fig. 10 Plan of the Ilkhanid city of Sultaniyya (about 1330). The location of the tomb-mausoleum of Oljeytu can be seen in the middle of the fabric.

tell us that the grand city of Dadu was largely intact in the early phase of the 14th century, and therefore its role as a potential model for Oljeytu's Sultaniyya, Timur's Samarqand and Shahr-i Sabz cannot be underestimated. [Figures 8, 9]

1.12 Ilkhanid Sultaniyya:

Arghun, the sixth Il-Khanid ruler of Iran visualized Sultaniyya as a summer capital owing to its location within abundant pasture lands . His son Oljeytu Khudabanda (1304 - 1317) transformed it into the capital of the Ilkhanid empire.

The chief purpose of the settlement was to serve as a nomadic encampment—characteristic of dynasties of tribal/ nomadic origins or those dependent on tribal support for the maintenance of their ascendancy. The yailaq or summer camp provided a suitable occasion for the ruler, who might otherwise enjoy a predominantly urban life-style, to fraternize with the other tribal khans, playing one off against another or cementing loyalties with marriage alliances, renewing personal ties of allegiance, and participating in traditional pastimes such as feats of horsemanship and chase. Furthermore, such yailaq or qishlaq locations encouraged villages or small settlements to grow around them, in order to provide for the basic needs of the ruler and his entourage.¹⁹ [Figure 10]

Sultaniyya was essentially composed of an outer city and an inner citadel or qala. The circumvallating ramparts of the city were greatly enlarged in Oljeytu's reign to accommodate the substantial increase in population owing to the city's new-found prosperity. The citadel was square in shape and surrounded by a moat, thereby physically separating it from the main structure of the city, a feature that was in fact repeated at Samarqand about seven decades later. The enormous tomb of Sultan Oljeytu, which survives even today; is characteristic of the giant scale of many other such monuments which once dotted the urban landscape of the city.

Sultaniyya was quite literally the pride of the Ilkhans. Its urban structure, monuments and buildings were perhaps the most elaborate the Ilkhanid court could afford in the early 14th century, and it is therefore no surprise that they

¹⁹. Gavin Hambly, "A Note on Sultaniyeh/ Sultanabad in the early 19th Century." AARP, 1987, pp. 89.



Fig. 11 The royal encampment at Sultaniyya/ Sultanabad (1807- 8), showing tents along with permanent pavilions and structures. (After Louis Debeux: *La Perse*)

were used as prototypes by later rulers. When Timur established his new capital at Samarqand, he not only modeled his immense congregational mosque the Bibi Khanum after the one in Sultaniyya, but in order to enhance its prestige, surrounded his new capital with villages named after the largest cities known to him: Sultaniyya, Shiraz, Baghdad, Damascus and Cairo.

As mentioned earlier, Sultan Oljeitu is said to have used the city as one of his many camping stations in eastern Iran. This obviously meant that he spent little time in the city, despite its status as his capital city. An examination of his geochronology or movements over time (Charles Melville), demonstrates that the spirit of the 'nomadic Mongol' was still very much alive in the minds of the Ilkhanid elite; causing migrations or movements to be initiated between cities largely for purposes of war, climate and tribal solidarity. The number of military campaigns in Oljeitu's reign was very low, but the Sultan is said to have unfailingly moved each year between summer and winter quarters, spending about a total of one hundred days in an year on the migrations themselves. Sultaniyya was in some sense Oljeitu's chief seasonal retreat or residence, rather than a permanently occupied capital. Perhaps one important reason for its choice over the near-by Tabriz, were the plains around the city, which were sufficiently large enough to accommodate the encampments of the affiliated Mongol herds and the yurt camps they set up, who would arrive to pay tribute to their emperor each year. [Figure 11]

1.2 Samarqand, Shahr-i Sabz and Herat as representative examples of the Timurid City

In order to use the Central Asian or Timurid city as a reference model for comparison with the Mughal city, I shall first and foremost attempt to evolve the notion of a 'schematized' city type in the region. Few surviving examples can be seen today, and therefore three cases, namely Samarqand and Shahr-i Sabz in present-day Uzbekistan; and the city of Herat in Afghanistan—are examined in detail. These three urban centers developed mainly during the Timurid and the post Timurid era, in the time frame between 1370 and 1420, though there was a large measure of identification and growth even beyond these mentioned dates. I shall however at this point concentrate only on the urban schema in its typical,

formative period of growth. It shall necessitate here to first examine the Typal Variations of the Timurid city.

Even a cursory observation makes it quite evident that the three cases fall into two distinct categories based on their formal characteristics; the first of these being the 'Organic-Accretive, Geomorphic' city - with a distinct, formal structure of elements and public spaces (Samarqand being the example); and the second being the 'Regular, Geometric' city - with a pre-conceived urban skeleton (Shahr-i Sabz and Herat being the examples).²⁰ The chronological order of establishment or foundation was 1370 for Samarqand, 1379 for Shahr-i Sabz, and 1413 for Herat; thereby making Samarqand and Shahr-i Sabz roughly contemporary. Despite this common aspect of time and even though Timur himself was largely responsible for the inception and development of both these centers, there exists a marked contrast in their urban character. The subsequent discussion on each of the three cities and the urban processes which were particular to each of them shall make these queries clear.

1.21 Timurid Cities: Morphological Characteristics and Urban Patterns. Samarqand, Shahr-i Sabz, Herat.

1.211 Samarqand

Little physical evidence survives to reconstruct the overall physical structure of the city of Samarqand as it possibly appeared during the reign of Timur (about 1370-1404), although substantial information does exist on the arrangement of individual monuments within the city and their immediate environs. This part of the thesis shall therefore combine information gleaned from historical descriptions and narratives with conjectures derived earlier, in order to explain the significant urban processes in the city.

The presence of a sizable urban population on the site of the pre-existing city of Samarqand is the first important point to be mentioned here. This caused the surviving urban structure to be 'appropriated' by the Timurid rulers, then suitably modified and superimposed with a new configuration contemporary to

²⁰. Manu P. Sobti, Urban Form and Space in the Islamic City: A Study of Morphology and Formal Structures in the city of Bhopal (Central India), Undergraduate Thesis, School of Architecture CEPT, Ahmedabad, pp. 3 - 7.

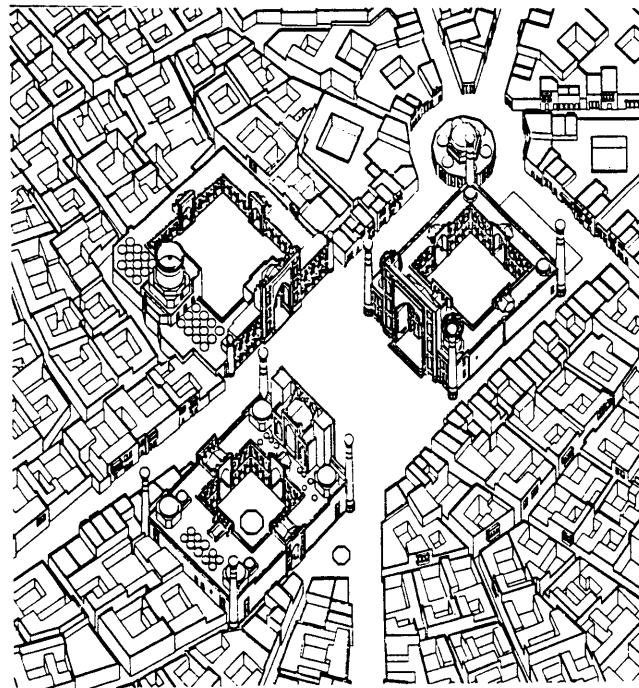


Fig. 12 Map of city of Samarkand (about 1800) showing the citadel, inner city within the walls and the suburbs beyond. (After Bumin and Kruglova)

Fig. 13 Axonometric view of the Registan Square and the surrounding fabric, Samarkand.

their era. The urban plan of the Timurid city could be described as a matrix of relatively undifferentiated residential sectors, circumscribed by a protective wall. The 'ark' or citadel dominated the western margins of the city and was connected to the 'city proper' or shahrestan by means of a rope-suspension bridge, across a deep ravine through which ran an artificial aqueduct - the Joyi Arziz.. The central core of the city was delineated by means of the formally positioned 'Registan' complex - which effectively combined public structures with urban space. It also functioned as the chief ascent along the commercial spine; which began at the citadel, passed through the Registan quadrangle, ran along the linear bazaar-suq, past the gigantic Bibi Khanum Mosque; and exited out of the city at the Akhani Darwaza situated on the north of the city.²¹ In schematic terms, the city had a dense, built-up core enclosed within a loose perimeter. [Figure 12, 13]

Two urban attitudes, prevalent in Timurid Samarqand, immediately become evident from this short description. The first of these was the technique of Urban Infill or Replacement, literally meaning the demolition of older structures, and their gradual replacement by newer ones on the same site; possibly the only way to initiate fresh growth and development in an otherwise compact and homogenous urban tissue. The second device was that of Extra-Muros Additions to the Urban Fabric, which meant that buildings complexes and ensembles, or extensive garden estates, were attached at certain locations on the urban periphery, near the city walls. Both devices were radically different in their effects on the growth of the fabric, the first causing tissue identification, by its typical action of demolition and rebuilding parts of the city, and the accentuation or polarization of isolated points within the urban structure—playing a centripetal role to some extent. On the contrary, the second process caused the urban fabric to actually loosen up or 'scatter' and develop directions or emanations of growth on the urban periphery, playing a more centrifugal role in the urban process.²²

The striking quality of the Urban-Infill method was the construction of immense, often over-scaled monuments at prominent locations within the dense

²¹. Samarkand Revitalization: International Architectural Competition on Ideas for the Ulugh Beg Cultural Center (report), 1989, pp. 13 - 14. Also see Hatice Yazar, "The Texture of the City of Samarkand", Aga Khan Program Travel Grant, 1990, pp. 5 - 6.

²². Bernard O'Kane, Timurid Architecture in Khurasan, pp. 104 - 105.

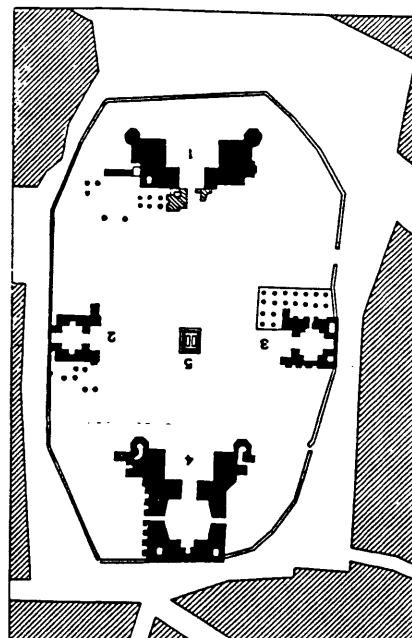
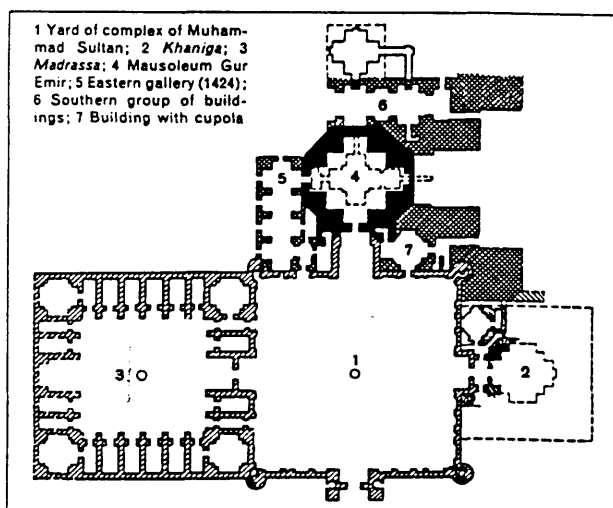


Fig. 14 Plan of Gur-i Mir, Samarkand (1398); showing position of building within the urban fabric.

Fig. 15 Bibi Khanum Mosque, Samarkand (1398); showing surviving parts of the building and position of building within the urban fabric.

surrounding tissue. The majority of such additions had well-defined, regular(often symmetrical) and decorated exteriors; thereby providing an unimpeded passage for the spectator all around the building, and causing the building to be appreciated in the round, almost as a piece of sculpture. Influential patrons comprising of the royalty and the nobility obviously gave the architect a free hand in designing almost exactly as he pleased in the available space provided to him. The unrestrained freedom of design, proportions and budget usually resulted in a strictly symmetrical plan, largely devoid of all sital ideosyncrecies. It characteristically had a regularly disposed interior complementing an exterior in the form of a rectangle, or, as with the Gur-i Mir—an octagon preceded by a pishtaq. This element of symmetry is omnipotent and absolute in the mosque of Bibi Khanum and the Gur-i Mir complex, while that of the shrine of Ahmed Yasavi is as close as the different functions of the parts of the complex would possibly allow.²³ These projects also meant that space and residential tissue around important complexes such as the Gur-i Mir and the Bibi Khanum mosque was actually cleared or demolished in the process. Such was the importance to Timur of this isolation (or the 'relative indifference') of formal structure from surrounding fabric, that he was prepared to order the destruction of any existing buildings on the site involved—a move that in most other Muslim societies would have aroused the wrath of the Muhtasib and other members of the ulema, more so since arbitrary confiscation of the land was contrary to the Sharia and would invalidate the waqf. ²⁴ But we have the well-documented accession when Timur ordered the destruction of houses in Samarqand in order to suitably create a bazaar, and his subsequent refusal to pay any compensation for his actions.²⁵ And in the case of the Gur-i Mir complex, Yazdi clearly says that several houses in the vicinity were destroyed and a garden was created around the mausoleum.²⁶ Such calculated contrast and difference in the scale of the formal interventions at the urban scale versus the surrounding residential tissue is achieved later in a relatively more subdued and refined manner by the Mughals. [Figure 14, 15]

²³. Bernard O'Kane, *Op. Cit.* pp. 104.

²⁴. *Ibid*, pp. 104.

²⁵. Gonzalez de Clavijo, *Historia del Gran Tamorlan*, pp. 184 - 86.

²⁶. Saraf ad-Din Ali Yazdi, *Zafar-nameh*, pp. 421. Also see H. Hookham, *Tamburlaine the Conqueror*, pp. 219.

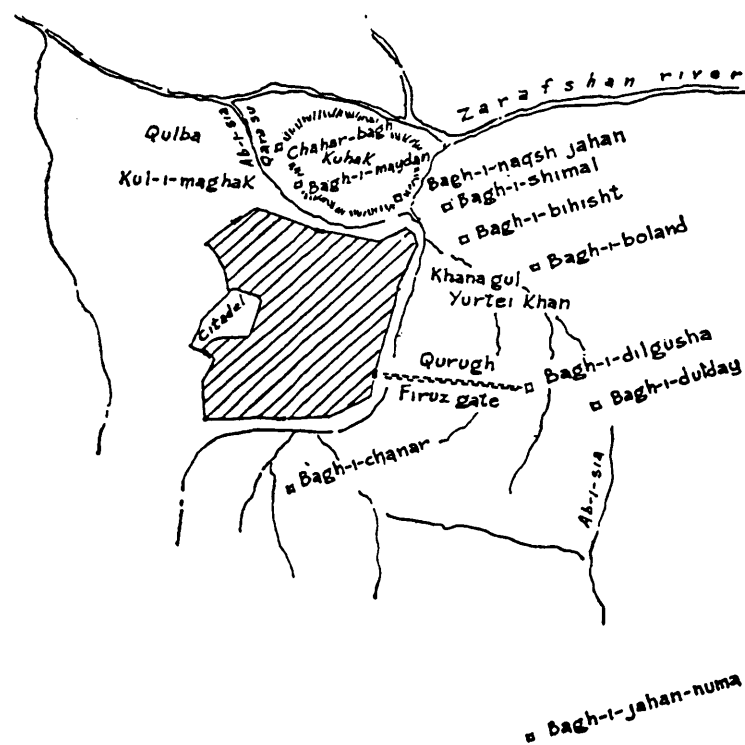


Fig. 16 Plan of the city of Samarqand in the 15th century showing Garden Estates and Orchards.
(After Donald N. Wilber)

Conversely, the Extra-Muros additions were responsible for the creation of garden estates on the city peripheries, beyond its walls. These ensembles displayed the characteristic symmetry of composition evident in the larger monuments in the city. Built on an unprecedented scale in terms of size and sheer numbers, these gardens possibly surpassed all other known examples, even Isfahan, where Malikshah is supposed to have built four after establishing it as his capital in 1072.²⁷ Timur evidently wished to surpass all known precedents while he created his capital par excellence Samarqand; and perhaps desired something even more ambitious—the recreation of the suburban environment of the 'yailaq', the summer pastures in which tents would be pitched along a meadow, with the court and flocks moving from one pasturage to another when grazing was exhausted. In his gardens Timur could realize all the pleasures of these streams and meadows, moving at caprice from one to the other, staying either in tents, or in small garden pavilions, with the attractive attendant values of urban civilization close at hand.²⁸

From Babur's visit to the city of Samarqand²⁹ in 1497, a conjectural map showing the approximate structure and spread of gardens around the city may be produced. An entire 'necklace' of garden settlements, named after the renowned cities of the Muslim world, which Timur had conquered in the course of his expeditions, encircled Samarqand. These were named as Cairo (Misr), Damascus (Dimishq-), Baghdad, Sultaniyya, and Shiraz; and were used to house craftsmen and scholars brought in from each of the respective cities. The Timurid gardens which encircled Samarqand included the following: Bagh-i Dilkhusha (Heart's Ease), Bagh-i Shimal (North Garden), GulBagh (Flower Garden), Bagh-i Now (New Garden), Bagh-i Maydan (Garden of/ at the square), Bagh-i Chinar (Garden of the Plane trees), Bagh-i Naqsh-i Jahan (Plan of the World), Bagh-i Bihisht (Paradise Garden), Bagh-i Buland (Long Garden), Bagh-i Jahan Numa (Guide of the World); and thereafter in the reign of Ulugh Beg—the Bagh-i Dulday (Perfect Garden), and the Bagh-i Naurozi (of the New Year's Day), were added.³⁰ [Figure 16]

²⁷. Pinder Wilson, "The Persian Garden", pp. 75 - 76. Also see Donald Wilber, *Persian Gardens and Garden Pavilions*, pp. 23 - 31.

²⁸. Bernard O'Kane, *Op. Cit.*, pp. 105 - 106.

²⁹. Lisa Golombek, *The Timurid Architecture of Iran and Turan*, pp. 174 - 175.

³⁰. Zahir ad-Din Muhammad Babur, *Op. Cit.*, pp. lxxix - lxxxi (Appendices).

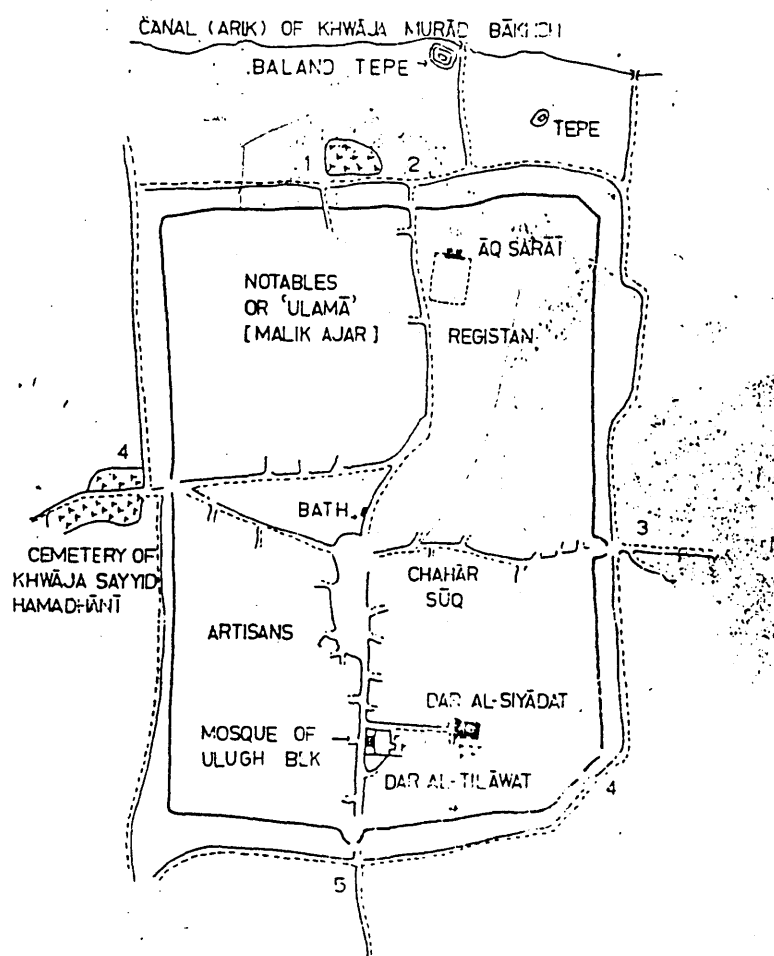


Fig. 17 Plan of Shahr-i Sabz, showing position of enclosure wall and other surviving structures.
(After Masson)

As an overall composition, the city of Samarqand must have presented the following view to the spectator - he would have first and foremost seen the approximate division of the urban settlement into three distinct parts or zones, almost as three concentric layers. There would have been the innermost core, which had a prominent citadel rising above a dense, homogenous matrix of urban residential tissue; an intermediate layer of relatively looser tissue, comprising of larger complexes of an institutional or social function and certain important garden estates; and finally an outer circumvelling layer of farmlands, large garden estates and estates—all belonging to the Timurid nobility. As is in fact a characteristic feature of the city even today; the urban fabric was largely dominated by green vegetation interspersed at numerous locations within the urban fabric. The next part of the discussion is a brief description and urban analysis of the city of Shahr-i Sabz, which gained prominence as the second capital of Timur.

1.212 Shahr-i Sabz

Since Kash was Timur's birthplace, he devoted much effort and care in turning it into his capital/ *pa-i takht*.³¹

'Shahr-i Sabz', translated literally means the Green Town or the Vegetable Town (!); though the explanation given by Saraf al-Din Ali Yazdi in the *Zafarnama* seems convincing to most scholars. He (Yazdi) explains that the city of Shahr-i Sabz owed its name to the rather abundant greenery of its meadows and orchards, where all sorts of unusual plants were grown. Babur Mirza's explanation of the same topic attributes this 'picturesque' name to the fact that in spring of each year, the barren waste or *duwarha* were entirely covered with verdure - therefore giving it the appearance of a lush, green city.³² [Figure 17]

The later fourteenth and fifteenth century historians rightly ascribe the incredible rise of the city's prominence to the internal politics of Transoxania. Its unique development however seems to have depended on the very personality of Timur himself, the descendant of a tribe of Turki-cized Mongols, the clan of Barlas. He seemed to demonstrate a constant attachment to the vilayat of Kash (in literature

³¹. Ibid, pp. 83.

³². Ibid. pp. 83, 125 - 8, 138.

Kash and the city of Shahr-i Sabz, are names used interchangeably), where he was born, and from where his political career actually began.³³

It is still somewhat unclear as to why and when Timur decided to make Shahr-i Sabz his second capital after Samarqand. For a certain length of time both cities seemed to have functioned as parallel capitals, though Babur asserts that Timur finally deserted the city (Shahr-i Sabz) in favor of Samarqand, when it became reasonably clear that the latter could be better developed. The literary sources however, leave no doubt that by 1370, he had chosen Samarqand as his main capital when he ordered a qal'a and a hisr (citadel), and walls for the town, and the construction of other grand public buildings and palaces; appointing his amir Aq-Bugha as the chief overseer of works. These grand constructions in the city of Samarqand probably included the 'Inner Fortress', an enormous four-storey building, later known as the Goksaray or Kuksaray.³⁴ This structure was however never the favorite with the emperor as it was 'architecturally less successful' than the later buildings of his reign; when he commanded far greater resources and had the unrestrained services of a large mass of skilled craftsmen and builders from foreign lands.³⁵

Shahr-i Sabz was a fresh urban development imposed within a smaller pre-existing rural settlement, obviously creating fewer problems of foundation. Its layout and design was therefore pre-conceived and far more deliberate in its overall effect of impressing the spectator than in the previous case of Samarqand. Significantly, here the urban plan is rigidly geometrized in order to create the core of the imperial city and actually sets the precedent for similar foundations in the later Timurid period and subsequently in the Mughal era as well. The overall layout of buildings within the city was determined to a large extent by the general plan of the city, which was organized by the intersection of two axial streets running north-south and east-west, thereby dividing the urban sprawl into four roughly equal quadrants. The central pole or square of intersection of the two axii was occupied by the characteristic domed structure (possibly serving as the antecedent to the next one in the city of Herat), called the Chaharzu,

³³. M. E. Masson and G. A. Pugachenkova, "Shahr-i Sabz from Timur to Ulugh Beg" (Part I and II), pp. 103 - 109.

³⁴. Ibid, pp. 113 - 114.

³⁵. Le Strange (tr.), Clavijo, Embassy to Tamerlane, pp. 285 - 286, 289 - 290.

Chaharsuq or Chaharshi, with its shops linearly stretching to the four city gates.³⁶ The accentuation of axis, center, and particularly the relative isolation of monuments can be seen today in a far more accentuated manner among the scant ruins of the city, since most of the urban residential fabric which surrounded them once is no longer present. An enormous protective, enclosure wall with one immense surviving gate defines the area of the city and seems to effectively contain all the monuments within its domains.

Hafiz-i Abru bears out Babur's assertion that Timur went to much trouble to make Shahr-i Sabz a worthy capital, writing that the Sahib Quijan or the Lord of the Auspicious conjunction of Planets; and his later heirs - particularly Ulugh Beg, who wholeheartedly continued Timur's ambitious building program, brought the town to the very peak of its glory. The late 17th century scholar, Muhammed b. Badi' b. Muhammed Malina could well, if inaccurately write that—".....on the instructions of Emperor Timur.....his high officials and amirs also built there (.....at Shahr-i Sabz), so that (as Hafiz-i Abru relates) madiasar, khanqahi, rabad/ areas of habitation, hawdi/ cisterns or tanks, and ornamental pools suddenly appeared all over Shahr-i Sabz and its urban vicinity, within a very short time of its inception as the second capital. The underlying purpose of Timur's dramatic actions as regards the construction of massive edifices such as commemorative structures and city layouts within Shahr-i Sabz is illustrated in the following quote from the Zafarnama—

" As the efforts of the Amir Timur were all aiming at world prosperity, the great sovereign desired to leave long-lasting remembrance of his passage from the Iranian provinces. He had actually behaved the same way, building renowned places in the Turanic region. And as is said in divine words, all construction was upto this command. Thus says the Qur'an to those who request or desire a deed in this world: "He is the one who has made you heirs of the primeval people, and on earth he has raised you in ranks the ones on the others". (Qur'an, Chapter 6, v. 165) This is why the Amir Timur wanted to leave marks of his masterpieces and ordered that the construction of large works in the region of Baylaqan should begin.

³⁶. The central bazaar of Shahr-i Sabz is locally ascribed to Nazar Beg, who seized the town in the 1760s, made himself independent and carried out various works. However, both the plan and the fabric suggest that it is an 18th century restoration/ reconstruction of a 15th/ 16th century structure.

A plan of the city [..... Shahr-i Sabz] was designed, a city with a wide wall, a deep ditch, many houses, a public bath, a caravansaray, a square and a quadripartite zone prepared in advance for the gardens. The perimeter of the walled enclosure with its area of 2400 cubits; was additionally increased by the thickness of the wall which was 11 cubits; furthermore the height of the enclosure upto the communicating trenches was another 15 cubits; the width of the ditch was 40 cubits, and its depth was around 20 cubits. The guard houses were built in the corners and on each side there were entrances and additional loopholes.

It would have been an extraordinary event that a sovereign would erect in one year only such a big construction. But this important city was completed in a month. The men of knowledge were astonished; the world was made more beautiful and worthy, and saw reflected in its mirrors precious presents other than violence and revenge. A sovereign, who knows how to show anger and rage, also knows how to make the Earth more lively with grace and benevolence - in the honor and the praise of God, of course. The shadow of God's compassion never ends for those who live in this world. Be always shining on the East and the West his government's sun; this is what is written on the walls of the city, two inscripted lines which say - Coming back from Ghaza [?] in the year 806 of the Hegira, Tamerlane - The Prince of the World, Pole of the Reign, the State and the Faith, in a months' time he built this city."³⁷

Clavijo describes that the strong-walled citadel of Shahr-i Sabz was surrounded by a vast number of houses and gardens (in effect a complete ring of suburbs), which leads him to describe it as a town of reasonably large dimensions. The cumulative urban district included the city proper and the numerous dependencies of Qarshi, Khuzar and others; and was calculated as three farsakhs/ about 20 km. square by the estimate of Hafiz-i Abru. This may seem as a gross exaggeration, as Bartold has argued³⁸, though it is known that the entire Kash area was well-built or a stronghold/ Mawadi-i Hasina.

Clavijo's account continues in its descriptions of the cultivated lands of Shahr-i Sabz in the early fifteenth century, as a straight-edged plain, intersected by streams and canals, covered by numerous villages amid fields of wheat and cotton, vineyards and orchards, and gardens in which fruits- particularly

³⁷. Nizam-ad Din Sami, tr. Necati Lucal, *Zafer-nameh*, pp. 343 - 344. Isfizari also relates that Tamerlane ordered the construction of a madrasa/ convent in Langar-i Amir Ghiyas, core of a future village, which was provided with the cross-roads of main markets. See Mu'in al-Din Zamci al-Isfizari: *Rawzat al jann at if ansaf madina Herat*, a cura di Barbier de Meinard, in *Extraits d'une chronique persane de Herat traduits et annotes*, in *Journal Asiatique* 16, 1860.2, pp. 500.

³⁸. Bartold, "Kafizi-Abru i Ego Sochineniya", 21, note 2, *Sochineniya VII*, pp. 90 - 92.

melons, grew abundantly.³⁹ The narrative of the Chinese embassy further states that in the south-eastern part of the town the gardens were somewhat hilly; and that outside the town, some 5 km./ 10 li. to its west there were some good game reserves, as well as sparse woods. Beyond this built up area, there existed the 'Mawadi', roughly translated as 'urban district' in the sources; and further corrupted to the word 'mauza', a rather specific term used for areas outside the town walls, often surrounding them entirely or radiating outwards for a considerable distance. These lands, which were mostly gardens, orchards or productive fields, belonged to the urban population living within the walls of the city (the shahrestan); and were sometimes also equipped with summer houses, to which these people would retire to in the hot season. Mawadi were therefore neither permanently settled areas nor winter quarters/ qishlaq. From other descriptions, such as those of European travelers, these qishlaqs, and the town which was located in the center of them, was surrounded by a strong perimeter wall, which is said to have reached a total length of 88 km.⁴⁰

1.213 Herat

The Herat oasis reached its greatest development under the Timurid interventions during the last phase of the 15th century, and a view from the foothills that overlooked the city on the north revealed its division into distinct districts. The inner, walled city, with the cemeteries and gardens immediately outside its walls, could be seen only as a tightly packed mass. The long turquoise strip of the Khiyaban with its immense religious buildings and massive tombs gained clarity as it reached towards the mountains. An outer ring of gardens and palaces occupied the middle foreground, and immediately below the takhts along the Gui-ye Soltani rose the tombs of the Maqbare-ye Gazorgah.⁴¹

The case of Herat is significant, since it was the new Timurid capital of the 15th century, and it is actually here that one would expect to find an acceptance or rejection of Timur's ideas on town-planning by his immediate successors. The means employed in Herat by Shah Rukh, Timur's immediate successor, and more significantly by Sultan Husayn Bayqara, for the urban progress in the city, were partly dictated or devised on the basis of the earlier ideas. Foremost of all, the

³⁹. M. E. Masson and G. A. Pugachenkova, *Op. Cit.*, pp. 110 - 111.

⁴⁰. Cf. Kuhn, *Ocherki Shahkrisyabskogo Bekstva*, pp. 217.

⁴¹. Terry Allen, *Timurid Herat*, pp 46.

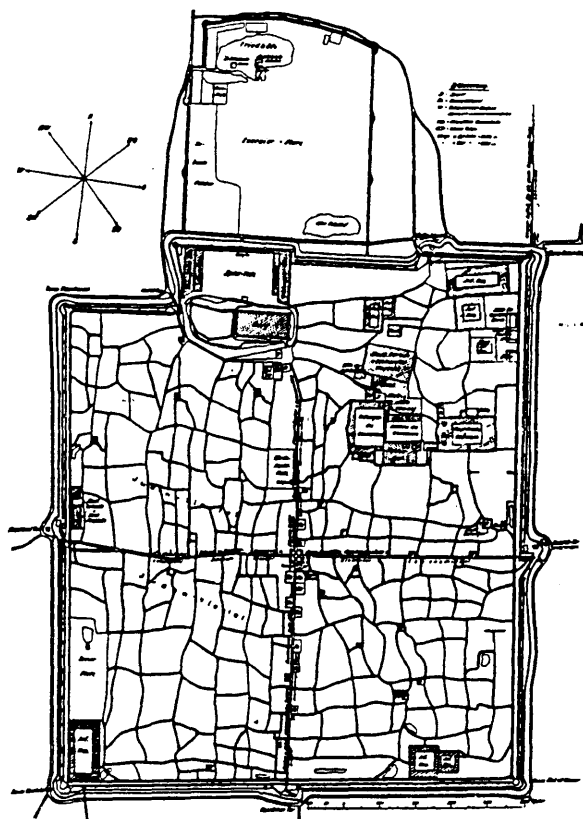


Fig. 18 Plan of Herat, showing walled city, the cross axial streets and the residential sectors of the city. (after O. Von Niedermeyer and E. Diez)

dense four-quadrant system belonging to the older city of Shahr-i Sabz was adopted for planning the city, and buildings were constructed both in the intramural space and in the extra-muros space of the walled city, thereby actually adhering to a subconscious model. [Figure 18]

The Herat of the Timurid period was also the undisputed intellectual focus of the Central Asian cultural sphere. This was especially true in the second half of the 15th century, when Sultan Husayn Bayqara, and his advisor-friend 'Ali Shir', attracted to the city a large number of intellectuals and artists of the time from various locations.⁴² More significantly, the political stability and economic prosperity of the city caused the accumulation of a large number of craftsmen and artists of the time in order to help execute buildings commissioned by the royal family and increase the grandeur of the empire.

Shah Rukh's interpretation of the Sharia', and his rather strict observance of all its ceremonies and formal requirements, as against the rather loose 'semi-pagan' attitude demonstrated earlier by Timur—made it initially more difficult for him to demolish existing structures at free will and build within the old city of Herat, as had been the case for Timur in Samarqand.⁴³ Most larger complexes and buildings, which would have otherwise required such measures, were therefore built beyond the walls/ limits of the earlier city. Clearly, as in the case of Samarqand, most of these new developments began to fill the suburbs situated to the north of the city, more so since an abundant water supply was assured in that

⁴². Ibid, pp 24 - 32.

⁴³. Bernard O'Kane, Op. Cit., pp. 104 - 105. Also see W. M. Thackston, A Century of Princes, pp. 1 - 9. Here Shahrukh's affiliation and proximity to the religious ulema is obvious....

".... Later dynastic historians portrayed Shahrukh as a fully Islamicized , Persianized monarch who justified his claim to legitimate rule by appealing to the religious elements in society and resting his claims on a show of good works, piety and the dispensation of justice. The difference in emphasis is quite clear in the titles on the tombstones of Timur and Shahrukh in Samarquand. On both the marble slab covering Timur's grave in the crypt of the Gur-i-Mir and on the nephrite cenotaph in his mausoleum Timur is called "great sultan and most noble khaquan," with no further titles and no specifically Islamic epithets—instead, the inscription gives the lineage the Timurids claimed back to the Mongolian progenitrix Alanqoa and stresses the Barlas' claim to collateral relationship with Genghis Khan. Shahrukh's tombstone on the other hand, placed by his daughter Payanda Sultan, has typical Islamic phraseology. Beginning with the Muslim testament of faith, it continues: "This is a garden of Paradise wherein rests His Majesty the pious sultan and emperor, sultan of sultans, succor of the state, the world and religion, Shahrukh Bahadur Sultan, may God most High cause him to dwell on the throne of His pleasure and crown him with the diadem of beneficence." (fromA. A. Semenov, "Nadpisi na nadgrobiyakh Timura i ego potomkov v Gur-i Emire," in *Epigrafika Vostoka* 2 (1948): pp. 49-62; and 3 (1949): pp. 46-54.)

area. This growth gradually spread as far as the Juyi Injill in the reign of Shah Rukh, and to the foothills north of the city under Sultan Husayn.⁴⁴

According to Bernard O'Kane, there seem to have been four factors which played an instrumental part in the extensive suburban development of Timurid Herat.⁴⁵ Foremost were the precedents set by Timur for the development of the city of Samarqand, wherein devices such as 'mandatory demolitions' and Extra-Muros additions were used. Secondly, the extremely cramped condition of the inner walled city, which in some respect required the use of additional land, which suitably existed to the north of the city. Thirdly, where building complexes as opposed to gardens were concerned, the desire for a site that would permit the building to have a regular ground plan and its concomitant - a decorated exterior which could be appropriately viewed. Since antagonizing the ulema and the local populace was an unwise step, alternative sites were the obvious answer to the problem. And fourthly, the desire that probably motivated Timur to develop gardens around Samarqand, and one which is omnipresent in the art of the miniature in the 15th century; i.e. the love of the garden, or the integration/mediation of 'natural elements' into the urban architectural composition. It is perhaps impossible to disentangle this love or obsession from that of the nomad of his pasturage.

Towards the end of the 15th century, the urban aristocracy increasingly began to turn away from the institutions within the walls and its immediate surroundings to their own preserves: the baghs, takhts and gombads which ranged across the northern edge of the oasis. They began to distance themselves from their recent past, attempting as if to revive the Timurid urban traditions which had continually attempted a balance between the nomadic and sedentary elements of social order. They created for themselves exclusive suburban districts, containing residential and recreational spaces, located at vantage points some distance from the city. The only rationale which governed such schemes was the view of the city itself, obtained by means of a series of elevated viewpoints, precedents of which existed in Timur's garden in the Takht-i Qarace pass overlooking the city

⁴⁴. Terry Allen, Op. Cit., pp. 46 - 55.

⁴⁵. Bernard O' Kane, Op. Cit., pp. 105 - 106.

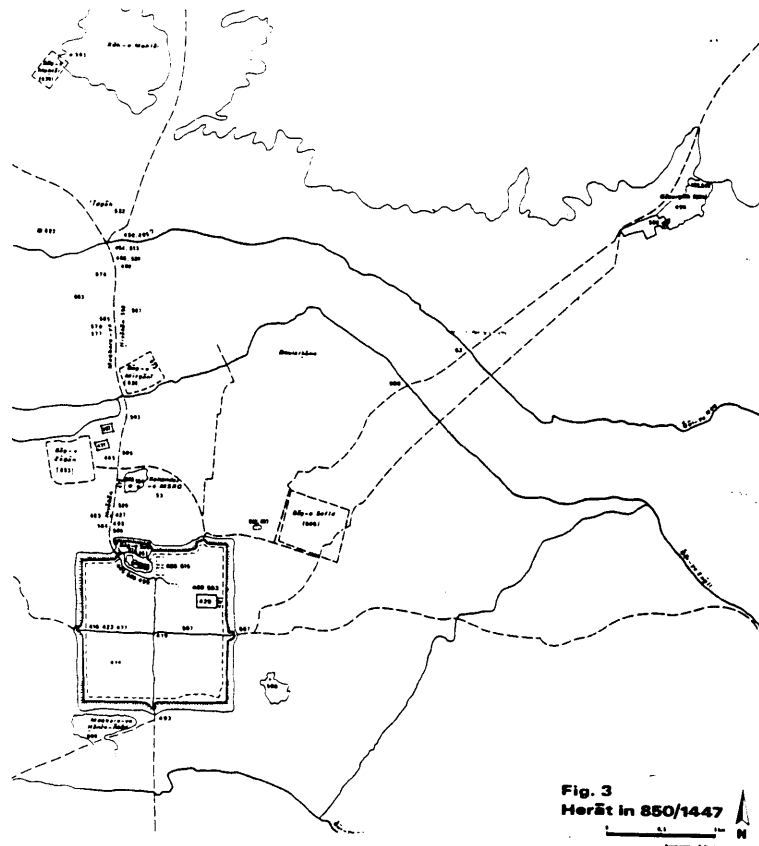


Fig. 19 Herat within the larger area of the oasis, showing suburban baghs, the Khiyaban and other important structures.

of Shahr-i Sabz.⁴⁶ True to their purpose, most of these complexes were situated in the foothills north of Herat, where there was a sense of being both within the city and outside it.⁴⁷ [Figure 19]

1.3 Conclusions

After an examination of the three cases listed above, two important observations can be made here—the first concerning the typical characteristics of the Timurid city as apparent from the discussion on Samarqand, Shahr-i Sabz and Herat, and secondly the relative contrast perceived in the plan-layout and language of formal elements within each of the examples.

The first observation records that in the course of the Timurid century, the urban elite, most of whom were the Chaghatai Mongols; constantly moved from a nomadic to a more sedentary lifestyle, moving in and out of cities. The tent-encampments of the early periods had partly gave way to city residences and urban madrasas built within the dense shahrestans, though frequent military expeditions kept alive typical outdoor traditions. The later Timurids however reverted back to their roots, thereby developing the suburban garden estates in the vicinity of large cities, far away from the congested shahrestans. It is this 'distancing' or separation of the urban elite from the common populace which gave way to the systematic development of formal structure in the Timurid-inspired Mughal city.

The second observation delineates changes evident in methods used to construct urban environments within the Timurid city. Timur largely adopted indigenous forms and patterns of growth in his cities, and also seemed to have possessed an unusual taste for the bizarre and the blatantly original - incorporating innovative forms and techniques for his projects. His efforts were virtually bold experiments at translating imperial might into built form, constructing the city as a potent symbol of his power. These qualities seem entirely at odds with the later kings,

⁴⁶. The Takht-i Qarace pass is at an elevation of almost 1700 meters, and Shahr-i Sabz, at 600 meters is visible from it although the distance of the town is 35 km. See Masson and Pugachenkova, "Shakhri Syabz pri Timure i Ulug Beke", trans. Rogers, Iran, Vol. 16, 1978, pp. 108 - 9; and Iran, Vol. 18, 1980, pp. 123 - 4.

⁴⁷. Terry Allen, Op. Cit., pp. 46 and 53 - 55.

such as Shah Rukh and Sultan Husayn Bayqara in 15th century Herat, who largely adhered to the past and its physical remnants in their creations, thereby in some sense actually consolidating an extant tradition. Their buildings and urban compositions therefore employed relatively modest (and timid) elements of design and structure.

2.0

COMPARATIVE ASPECTS OF URBAN PLANNING BETWEEN THE TIMURIDS AND MUGHALS

This part of the thesis examines urban developments within the Timurid and the Mughal city by the application of a matrix of variables, which bring out the inherent similarities or correlations observed in terms of formal and spatial structures in the two cases.

Social Structure within the Timurid and Mughal context is the first variable chosen for this comparison. Its influence on the physical make-up of the city may be measured in terms of the constant tensions prevalent between nomadic and sedentary factions of society and how they influence the characteristics of the urban structure. More intrinsically, it is the interaction between the diverse lifestyles of two social sub-groups—the Chaghatai Nomads on one hand and the Common Populace on the other, which essentially produces a special kind of city in both cases.

Political Hierarchy prevalent in the Timurid polity and the Mughal bureaucracy is the second variable chosen for the comparison. Both political systems were to a large extent autocratic, wherein all power was concentrated in the hands of the khan or emperor. High ranking amirs and military commanders controlled all other influential positions of state. The strongly patrimonial-bureaucratic nature of government caused the physical structure of the city to be used as a potent

symbol of imperial power. The evident differentiation of the formal structure of the city from its surrounding residential fabric; and the physical sub-division of the city into three parts or zones based on the relative political leverage were the obvious results of this power structure.

The correlations between the Timurid and the Mughal city therefore may be listed as follows:

1. Nomadic versus Settled/ Sedentary life.

The incorporation of elements of nature within the urban context. The royal encampment as the model for the urban settlement.

2. The subdivision of the city structure into three parts or zones —the Citadel (kohandaz, ark, qal'a), the City Proper (shahrestan, shahr-i khas or medina) and the Suburbs or rabad.

3. The delineation of the primary structure of the city by means of grand/ formal ensembles, in contrast to the more secondary structure relegated to the residential fabric.

2.1 Nomadic versus Settled/ Sedentary life: **Garden and the City**
Royal Camp as Urban Model

2.11 The Timurid Context:

The Timurid city imbibes within its physical structure the elements of nomadic and settled life, an attribute perceived in the Mongol capitals of Dadu and Sultaniyya. Apparent tensions created by the amalgamation of these two contrasting elements in Timurid society continued well until the era of the later Mughals; attaining a rather explicit expression in their urban creations. To a large extent therefore, the Urban-Infill or Replacement method seems to have been appropriate to the Persianate sedentary component of the culture which was developing in the Timurid city, while the addition of Garden Estates on the urban periphery was more a characteristic of the nomadic instinct carried by its founders, wherein fresh developments would always attached to a pre-existing core. Furthermore, the first component contributed more to the image of the

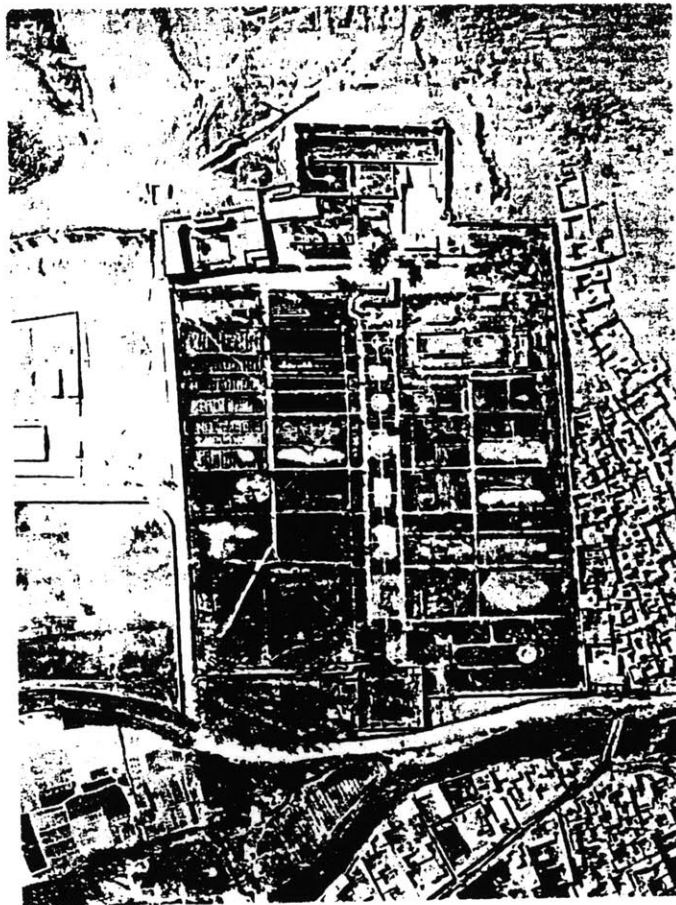


Fig. 20 A 'city' of yurts in Mongolia—a typical nomadic encampment.

Fig. 21 Yurts on the move In the Central Asian Steppes.

Fig. 22 Bagh-i Babur, Kabul. Aerial photograph showing bagh with attached caravanserai on the south.

dynasty within the dense shahrestan, while the second served the more practical purpose of organizing residential areas for the nomadic Chaghatai elite.

A brief examination of the socio-cultural milieu of the Mongols - the nomadic confederation constituting the Timurids, helps at this stage. The Mongols were essentially steppe nomads, used to a life of movement and shifting residence, wherein material possessions were limited to tents (yurts), numbers of horses, cattle and armed men controlled, wives/ slaves and children, and finally jewelry and family heirlooms which passed on from one generation to another.⁴⁸ [Figure 20, 21] 'Domain' or kingdom had broader definitions in this culture, wherein entire tracts/ stretches of land belonged to clan heads, who could suitably assert their rights on it against possible contenders. They were organized into tightly-knit sub communities, all sharing the common encampment. Mongol law, the 'yin and the yasa' traditions of the clan, caused sub-groups organized under separate individuals to be loosely affiliated to the central authority, in return for his organization of raids and attacks on potential enemies, and the equal distribution of gains from expeditions.⁴⁹ In later generations, possibly beginning with the reign of Timur and his successors; the Mongols began to build more permanent symbols or structures such as commemorative towers, pavilions, 'palaces' or buildings to represent the authority of a particular 'clan-head' or khan in their power centers. Moreover by this time one could have well ascribed to them some experience of sedentary attributes of urban life, which had reached some level of refinement owing to precedents such as Dadu, Saray, Maragha and Sultaniyya.

Such conditions gave rise to two significant aspects of urban architecture typical to the Timurid city - the incorporation of elements of nature within the urban fabric, such as gardens and water bodies; and the dependence of the urban settlement on the layout of royal encampment.

The major Timurid capitals and urban centers were virtual garden cities, resplendent with the countless garden estates belonging to the nobility positioned on the urban peripheries. [Figure 22] The dense shahrestan or city proper, wherein resided the common populace of the city, seems to have been

⁴⁸. Harold Lamb, Genghis Khan: Emperor of all Men, pp. 10 - 13.

⁴⁹. Beatrice Manz, The Rise and Rule of Tamerlane, pp. 1 - 14.

too built-up and crowded to suit the nomadic tastes of the amirs, whose activities demanded more generous amounts of space. Describing the city of Samarqand in 1404, Clavijo reaffirms this observation. He says—

“..... the city is surrounded on all sides by many gardens and vineyards, which extend in some directions a league and a half, in others two leagues, the city being in the midst. Among these gardens there are great and noble houses, and here the lord Timur has several palaces. The nobles of the city have their residences amongst these gardens, and they are so extensive that when a man approaches the city he sees nothing but a mass of very high trees. Many streams of water flow through the city and through these gardens, and among these gardens there are many cotton plantations and melon grounds.....”⁵⁰

Gardens also existed within the urban fabric, either as isolated enclosures or connected to institutions such as mausoleums and madrasas, which could pay for their maintenance and upkeep. Members of the royalty, the amirs and army commanders would set up camp in such gardens on certain occasions, though they definitely seemed to have preferred the larger suburban estates. Historical reconstructions show how Timur used gardens, or rather, how he used the city of Samarqand and the surrounding countryside in order to transform an urban agglomeration into a country estate. His itinerary on his return to Samarqand in 1404 is worth examining in this respect.⁵¹ It says,

“.....he entered Samarqand in early August and stayed in the Bagh-i Chinar, making a visit to the madrasa of Muhammad Sultan to order a mausoleum to be built. His principal wife Saray Mulk Khanum joined him there. Meanwhile his second wife Tuman Agha had been making her way back to Samarqand and had camped in the Bagh-i Bihisht, where he now joined her. Next, several days were spent in the Bagh-i Shimal, followed by the supervision of the building of the Gur-i Mir, including the construction of a small garden around it. From here he moved to the madrasa of Saray Mulk Khanum, where he resided in tents in its courtyard to oversee the construction of the Friday mosque, the great Bibi Khanum. He then went in turn to the Bagh-i Chinar, the Bagh-i Dilkhusha, and the Bagh-i Shumal. Timur now decided to add a pavilion to the south

⁵⁰. Clavijo, *Op. Cit.*, pp. 144.

⁵¹. Bernard O’Kane, “From Tents to Pavilions: Royal Mobility and Persian Palace Design”, *Ars Orientalis: Pre-Modern Islamic Palaces; The Department of the History of Art, University of Michigan*, Vol. 23, 1993. pp. 253.



Fig. 23 Samarqand, reconstruction of plan of one of the Timurid gardens— the GulBagh (After Donald N. Wilber).

Fig. 24 Timur granting an audience in a garden, seated under a tent canopy (Zafarnama, 1467)

end of the latter, bigger and more magnificent than those of his other gardens in Samarqand, and when this was finished a feast was held there. The quriltay at Kan-i Gil followed. Timur then moved back to the madrasa of Saray Mulk Khanum, and finally to the Gok (Kuk) Saray, a four-storied pavilion which had been built in the citadel, where various trophies from his campaigns were displayed. This was his last stopping point before he set off again on campaign on the 27th November, 1404 AD....."⁵²

Clearly, in the space of merely four months he had changed his place of residence over a dozen times. He resided mostly in gardens during this period, and in one instance in an encampment as well, an extraordinary testament to his ability to re-create a nomadic environment in the microcosm of the city and its surroundings.⁵³ Most movements within the city were likely to have been accompanied by an elaborate ceremonial involving troop processions, orchestral heralds and imperial guard, thereby heightening the imperial ritual. An avenue of poplars leading from the Bagh-i Dilkhusha to the city walls of Samarqand, had been planted on Timur's orders, perhaps to accentuate one of the ceremonial axes to the city.⁵⁴

The liberal patronage of the nobility obviously encouraged landscape design to reached unprecedented heights as an important element of architectural, agronomical and land irrigational theory and practice. The main type of 'designed' garden in the Timurid era was the Chaharbagh. Although physical remains of gardens of the time have not survived, there are contemporary descriptions and miniature paintings which give an idea of what they looked like. Architecture, trees, shrubs and water were harmoniously integrated in these creations, laid out on a geometrical pattern and planned with severe regularity with freely scattered spots of picturesque intimacy.⁵⁵ Similarly, elements such as water ways and canals incorporated within the urban fabric, were first observed in Dadu, and later in Samarqand and Herat. Not only did these serve as vital means of irrigation and human survival, but also as 'signifiers' which constantly reminded the sedentarized-nomad of his origins. [Figure 23, 24]

⁵². Sharaf al-Din Ali Yazdi, *Zafarname*, f. 2: 419 - 449.

⁵³. Bernard O'Kane, *Op. Cit.*

⁵⁴. Zahir ad-Din Muhammad Babur, *Op. Cit.*, pp. 78.

⁵⁵. G. P. Pugachenkova, "Architecture in Central Asia Under the Timurids," in Akbar, Siddiq-a- (Ed.), pp. 144 - 58.

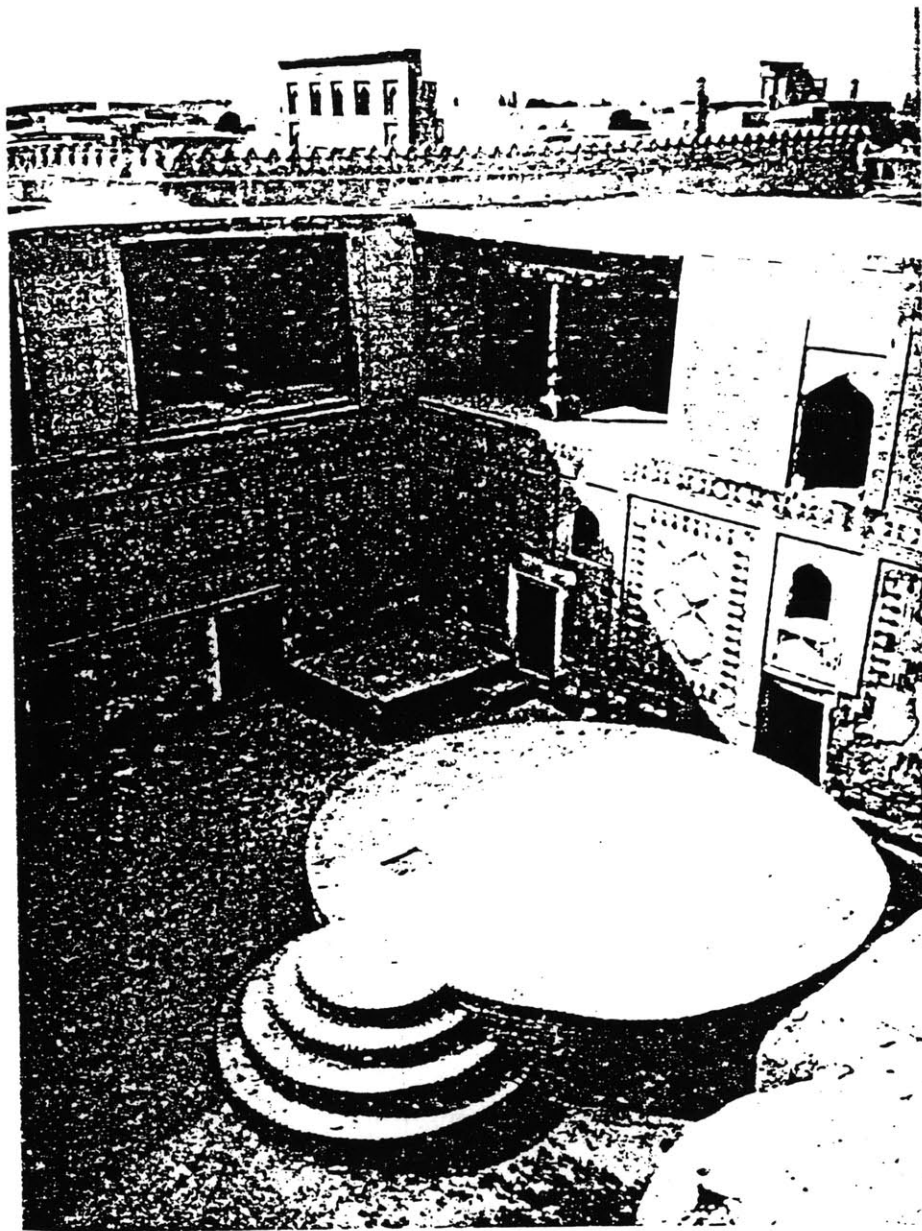


Fig. 25 Tash-Hauli, Khiva (1830 - 33). The Inner courtyard with stepped base for setting up yurt.
This may be a more modern version of what garden estates in the Timurid era were like.

The second important extension of this discussion is the simultaneous presence of the tent-city or encampment alongside the urban neighborhoods of the Timurid city. This was the obvious result of the intermingling of an ethnically different stock such as the Chaghatai nomads with the more sedentarized indigenous populations of the area. The influential amirs, who virtually controlled the political structure of the Timurid state, fitted better among their garden estates, surrounded by the tent-clusters of their armed clansmen. Timur himself initiated a phenomenal amount of construction activity in Samarqand, in order to enhance its image and fame—but strangely enough never used the city as his true residence. It was his city merely in name; so was Shahr-i Sabz for a certain span of time—both cases demonstrating that they were no more important than any of his material possessions. Timur, and likewise a number of his successors, never gave up the royal camp for the luxuries of a permanent palace.⁵⁶ Whenever he visited Samarqand, or any of the other cities of his empire, he did not live within them, but remained in his royal camp (the Ordu-yi Humayun), which was pitched outside the city walls and where he held festivals and feasts on the open plains.⁵⁷ As a result, the Kuk Saray and the Aq Saray palaces, which he built at Samarqand and at Shahr-i Sabz respectively; served more as buildings which housed a treasury and a prison, rather than a residence.⁵⁸ [Figure 25]

The royal camp and the capital therefore had had a simultaneous existence since the time of the early Mongols, and the Timurids were actually following a long-established tradition. Thus Hulegu, first of the Il-Khanid rulers of Iran, spent the spring in the meadows of Maragha - located to the south of Tabriz; while his successors preferred the well-watered plain of Sultaniyya. Marco Polo recounted

⁵⁶. Only one permanent, winter palace is mentioned at Nasaf, or Nakhshab, some 130 Km. from the city of Samarkand, built by the Chaghataid emir Kebek Khan (1318-26 AD.). Nakhshab later began to be known as Qarshi, from the Mongol word for 'palace', indicating the importance of Kebek Khan's palace. This palace seems to have been renovated/ partially rebuilt in 1374-75 under the name of Zinjir Saray (on the same lines as the names of the Timurid Kok Saray and Aq Saray). Most significantly, Timur seems to have spent a winter in this suburban complex, whose form was probably that of a large walled precinct with relatively small, detached buildings scattered throughout it, probably an entry complex and an audience hall being the main pieces.

See Lisa Golombek, *Op. Cit.*, pp. 182 - 183.

⁵⁷. Monika Gronke, "The Persian Court Between Palace and Tent: From Timur to Abbas I, in *Timurid Art and Culture*, eds. Lisa Golombek and Maria Subtelny, pp. 21.

⁵⁸. Clavijo, *Op. Cit.*, pp. 172. The Kok Saray palace is also mentioned in the *Baburnama*, pp. 41, 63, and 77.



Fig. 26 Baysunghur ibn Shahrukh seated in a garden. (Kalila u Dimna, 1429).

that the emperor of China moved with his court, into the country early in March and remained there in a great 'tent city' until the end of May.⁵⁹ Obviously, such migrational movements, which initially had a strong 'climatic' logic owing to their nomadic origins; later seem to have become more political and militaristic in their intentions, especially due to the expansions of kingdoms into large empires with centralized authorities. [Figure 26]

For the Timurids political and military power resided within the encampment, while the capital itself functioned as a cultural and artistic center. This practice to regard the capital city as a sedentary outpost in comparison to the royal camp, seems to have continued in a fairly intense manner up to the time of the Uzbek ruler Shaibani Khan, who set out to conquer the world, thereby seizing Herat in 1507; and then established a new capital at Bukhara, despite the relative intensity of the deterrent, local nomadic traditions which disqualified such a practice. Quite clearly, Shaibani Khan did not regard Bukhara as his permanent residence, nor the seat of his political power. We are told that when his court chronicler Khunji told him about the various capitals throughout history, the Khan responded and said, ".....let our capital be our saddle....."⁶⁰ This is yet another version demonstrating as to how the ability of the sovereign to move from one place to the other was important in ruling his spread-out territory. This principle, though abandoned by many nomadic rulers, nonetheless persisted throughout the Timurid period and remained fundamental at least until the beginning of the sixteenth century.

Clavijo visited the Timurid court in 1404 and gives a vivid account of the setting and grandeur associated with the royal camp. The camp, he reports, changed its location almost every other week, occupying the open plains along the Zarafshan river on the outskirts of the city of Samarqand. These tent and pavilion complexes were fairly elaborate in their set-up and overall arrangement, and served not only as residences of Timur and his entourage, but also as the venues for festivities and feasts organized by the ruler. Foreign visitors and dignitaries report that they had to pass through whole streets of tents before they finally reached the imperial tent of Timur himself positioned in the center of the complex. Most often, the royal camp was situated in one of the splendid extra-

⁵⁹. Sir Henry Yule (trans./ ed.), *The Book of Ser Marco Polo*, pp. 404 - 406.

⁶⁰. Fadlallah b. Ruzbihan Khunji, *Mihman-nama- yi-Bukhara* (Tehran 1341S/ 1962) , pp. 54.

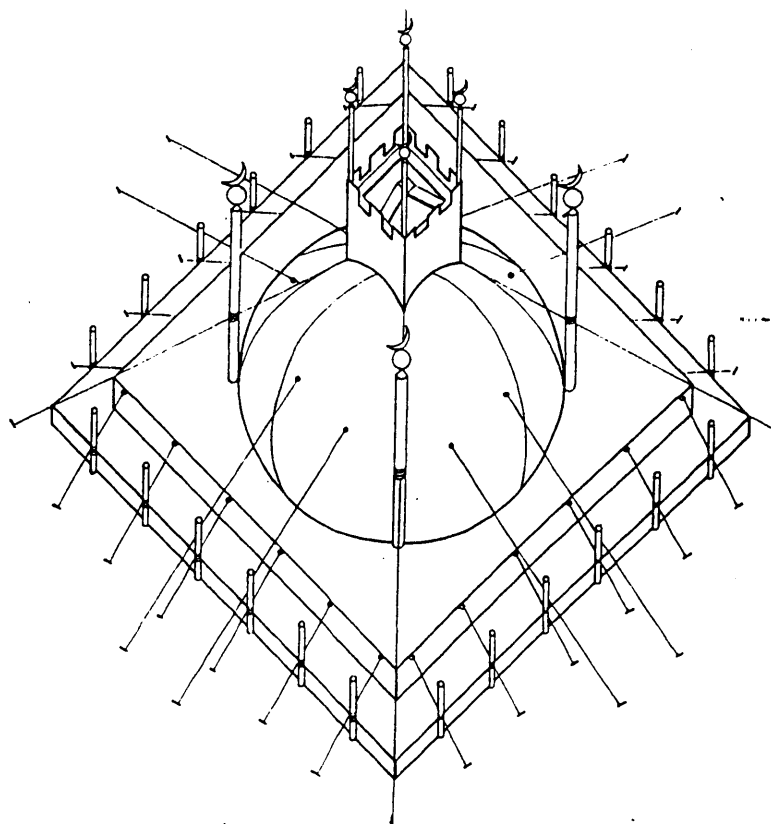


Fig. 27 Isometric perspective of a huge tent described by Clavijo.

muros gardens that Timur and the other members of the entourage had laid-out around Samarqand. These followed the model of the traditional Persian garden or the chahar-bagh—resplendent with fruit trees, shady paths, wells and water courses; enclosed by a boundary wall; but significantly larger in their dimensions, so as to reasonably accommodate the entire paraphernalia of the royal camp.⁶¹ [Figure 27]

In conclusion it may be said that such a life in tents and gardens, rather than in palaces within the city, evidently demonstrated a predominantly nomadic heritage, which reigned supreme in their psyche. Timur therefore, in my opinion, may be defined as a sovereign in a state of transition, struggling to balance or incorporate aspects of sedentary and nomadic lifestyles⁶², which is a tradition continued rather tenaciously by his successors and later by the Indian Timurids or the Mughals. All of them, including his son Shah Rukh and grandson Ulugh Beg, kept a mobile royal camp, although from time they, unlike Timur himself, used their urban residences as well. This noticeable tendency to choose residences outside the urban core, as was the habitual feature of the Timurid elite, is seen also in Timurid Shiraz and Herat, wherein a garden suburb was developed outside the city, comprising of houses arranged around garden complexes.⁶³

The hesitation visible in the act of settling down and building a capital at a particular location may also be ascribed to local Mongol tradition in Timur's era; which considered it inappropriate for a nomadic ruler to have a fixed residence, at least not a fortified one. The main reasons cited for Timur's final break with Amir Husayn, his companion seemed to have been the latter's decision to fortify the city of Balkh, which he had chosen as his capital, in 1368 Timur strong reaction was related to incidents that had occurred in the past; and which connected the building of a capital city or the act of 'sedentarization', to rebellion and consequent disloyalty by the accompanying amirs.⁶⁴ Furthermore, his upbringing according to the tribal-nomadic customs and rituals of the Barlas clan from which he hailed, caused him to summarily shun urbanized life and its

⁶¹. Clavijo, Op. Cit., pp. 131 - 142, 163. Also see Dietrich Brandenburg, Herat: Eine Timuridische Hauptstadt, pp. 51 - 53.

⁶². Monika Gronke, Op. Cit., pp. 19.

⁶³. Jean Aubin, "le meche`nat Timouride a` Chiraz", in Studia Islamica 8 (1957), pp. 76.

⁶⁴. Monika Gronke, Op. Cit., pp. 18 - 23.

advantages in the initial phase of his political career. Clavijo's pertinent observation at this stage that, ".....the Barlas notables lived by preference in small villages or in the country, rather than in towns.....", is useful to understand the effect of the cultural frame within which Timur was born and raised.⁶⁵

On the other hand, the idea or conception of having a capital was not totally unknown to the Mongolian nomadic rulers or clan heads. Most of the great Mongols, including Chenggiz Khan himself, had had their capitals, starting with the city of Karakorum, the seat of the Great Khans. Later on the Il-Khans followed suit with the cities of Maragha, Tabriz, and the newly founded Sultaniyya; whereas the Golden Horde chose Saray, Khubilai Khan and his successors Peking or Dadu. Only the Chaghataids in western Turkestan, where the nomadic traditions were more dominant than in the other Mongol territories, actually had no specific capital; and their ruler or head continued to move about with his entourage. Fadlallah b. Ruzbihan Khunji in his *Mihman-nama-yi-Bukhara* enumerates the various capitals of pre-Islamic times, but when he comes to the Chaghataids, he only mentions the 'diyar Ozbeg' - or the entire Uzbek territory as the sovereign's possible residence.⁶⁶ More significantly, in Khunji's mind, the nomadic ruler's residence is obviously not one or any specific city, but the whole territory under his control. This territory is what Khunji, quite understandably, equates to the capital cities of the other dynasties. Moreover, it seems that originating here, as seen in later Safavid and Mughal practices, it was not really the capital city, but rather the royal camp - or the 'Ordu-yi Humayun' (the gracious shelter....); where the sovereign actually exercised his power while moving from one location to another. Importantly enough, the direct lineage of the Mughals from the Chaghataids, beginning with Babur, is perhaps the reason for the rather analogous picture we see of Central Asian Timurid traditions being used in Mughal times.⁶⁷

⁶⁵. C. R. Markham, *Narrative of the Embassy of Ruy Gonzalez de Clavijo in the court of Timour at Samarkand AD. 1403-1406*, pp. 123.

⁶⁶. Fadlallah b. Ruzbihan Khunji, *Op. Cit.*, pp. 54.

⁶⁷. Monika Gronke, *Op. Cit.*, pp. 18. Also see Bernard O' Kane, *Op. Cit.*, pp. 249 - 269.

2.12 The Mughal Context:

The Mughals received this 'cultural legacy' from the Timurids, and the subsequent Shaibanids; and its influence on their psyche in terms of lifestyle and social structure was profound. The reconciliation between nomadic and sedentary behavior, which had begun with the Timurid was to have important implications in their urban schemes. Babur and Humayun, the first two Mughal emperors, present one with a rather confused picture of urban planning policies, though small parts of their projects survive as isolated monuments. It would be extremely advantageous to examine this early transient phase of development since it would explain more about how an 'urban model', brought in from Central Asia is suitably modified and applied in a new context. I shall therefore extend this discussion, using a combination of conjectures and historical evidences still extant.

In the eyes of his Timurid relatives and the descendants of Chenggiz Khan's second son (called the Chaghatai Mughals), Babur's matrilineal descent from Chenggiz Khan disqualified his rights to the Timurid throne.⁶⁸ He held the cities of Samarqand, Bukhara and Kabul for brief periods of time, but had little support or enthusiasm from the urban amirs.⁶⁹ His Indian victories were therefore his only unchallenged ventures for a long time, and he immediately set about putting his visions of urban landscape, gardens and buildings into physical reality. Babur's immense struggle for position and succession, and being sidelined and neglected by his clansmen for reasons mentioned above—were in fact the root cause for his rather assertive attitude towards the fulfillment of his desires at 'transforming' the people and the land of 'Hind' into orderly entities.⁷⁰

Babur's most important contribution to the urban processes in the subcontinent was the development and extension of the 'garden city' concept, which he literally 'imported' from the familiar cities of his homeland, particularly Kabul,

⁶⁸. Catherine Asher, "Babur and the Timurid Char Bagh", in *Environmental Design* 11, (1994), pp. 46 - 47.

⁶⁹. Babur's quest for the throne seems to have been manipulated and often thwarted by two rival groups, the Timurids and the Chaghatai Mughals. See Maria E. Subtelny, "Babur's Rival Relations: A study of Kinship and Conflict in 15th-16th Cent. Central Asia" in *Der Islam* 66, pp. 116.

⁷⁰. Zain Khan Khwafi, *Tabaqat-i Baburi*, pp. 161 and Babur, *Op. Cit.*, pp. 531 - 532.

3 Line drawing of plan of Agra, early 18th century. Watercolour on cotton fabric, 294 x 272 cm. Jaipur, Maharaja Sawai Man Singh II Museum, Cat. No. 126. (Photo 1986)

1 Bagh-i Nur Afshan (Ram Bagh), 2 Bagh-i Jahanara (Zabara Bagh), 3 Tomb of Afzal Khan (Chini ka Rauza), 4 Tomb of Funnad al-Daula, 5 Chahar Bagh, 6 Mahiab Bagh, 7 Taj Mahall, 8 Red Fort, 9 Octagonal bazaar, 10 Jami' Masjid.

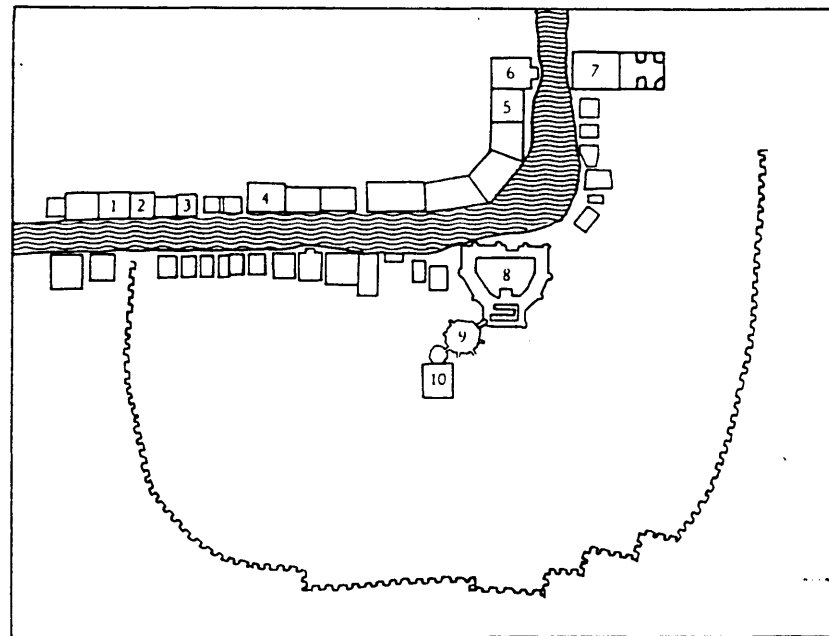


Fig. 28 Line Drawing of plan of Agra, early 18th century, showing baghs along the Jamuna river in Agra and the connected urban structure.

Herat, Ferghana, Samarqand and Bukhara into Hindustan.⁷¹ Its application was seen for the first time in the Agra of Babur's time; and reconstructions are close to accounts of Samarqand, Herat, and even to some extent the Mongolian 'Dadu'—where elements of nature mediate with urban form.⁷² [Figure 28]

Fragments of Babur's famous Char Bagh ("Four-Fold garden") or the Bagh-i-Hasht Bihisht ("Garden of the Eight Paradises"), built at Agra, on the eastern bank of the river, survive today. Babur's memoirs suggest that it may have served as his main residence and court, for it included baths, a large tank, an audience hall and private dwellings. The discovery of an 18th century plan of Agra in the Jaipur Palace Museum, on which this garden also features - inscribed in devanagari script - as "chahar bag patishahi" [chahar bagh padshahi] next to a "chahar bag dusarau patishahi" ("second imperial fourfold garden"), shows that the garden which was situated on the other side of the river Jamuna (Yamuna) adjoining the Mahtab Bagh and almost opposite to the site of the later Taj Mahal, did actually perform the function.⁷³ Not only does this building introduce into India the Timurid-Persian scheme of a walled-in garden subdivided into four quarters [ideally] by raised walkways (khiyaban) and canals (nahr); but it also becomes the literal 'foundation-stone' for the development of Mughal Agra as a "riverbank" city with a band like succession of walled gardens (and mansions) on both sides of the Jamuna. This convention was whole-heartedly continued by Akbar some fifty years later.

Ensembles, such as the one built by Babur in Agra, transported to Hindustan the conception of the suburban dwelling type used by the Timurid elite which developed in Herat towards the end of the 15th century. According to Babur's companion Zayn Khan, Babur's nobles followed his example by building gardens and dwellings 'on the models of Khurasani edifices' in India (one should take

⁷¹ Manu Sobti, *Op. Cit.*, pp. 18. From accounts in the Baburnama, it is evident that Babur is homesick, and attempts to replicate aspects of familiar cities in Hindustan; since he sees it but too apparently that returning to his homeland will be a reversal of his claims for legitimacy among his clans-men.

⁷² For a detailed research and analysis on Agra as in the initial period of Akbar, see—I. P. Gupta, *Urban Glimpses of Mughal India: Agra, the Imperial Capital (16th and 17th Centuries)*. Agra seems to be a substantially crowded city by Akbar's reign, therefore he establishes his capital there.

⁷³ Ebba Koch, *Mughal Architecture*, pp. 32 - 33. See also Zahir ad-Din Muhammad Babur, *Op. Cit.*, pp. 606. and Elizabeth Moynihan, *Paradise as a garden in Persia and Mughal India*.

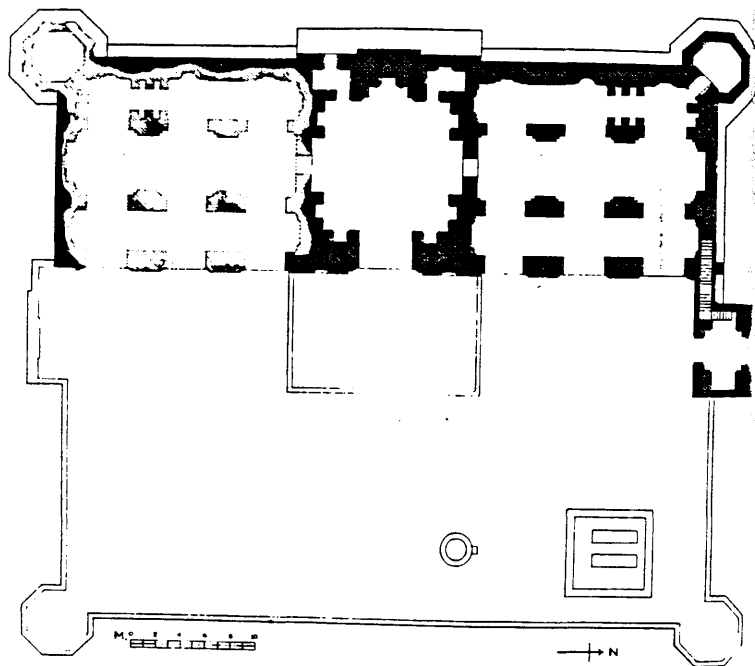


Fig. 29 Babur's mosque, Panipat—today called the Kabuli Bagh mosque since it was said to have stood at the intersection of the two cross axii of a garden.

note that during the Mughal era, Khurasan had a much wider connotation and included the areas of Central Asia and Afghanistan).⁷⁴ Likewise, other seemingly 'indispensable amenities' of the Timurid lifestyle such as royal hot-baths, were constructed to please the Khurasanis and Samarqandis who had accompanied Babur to India.⁷⁵

Secondly, being a true Timurid in spirit, Babur preferred to camp in gardens, than to reside in permanently constructed palaces. Throughout his small principality, he either refurbished pre-existing gardens or created new ones; combining practical needs with more whimsical attitudes. Therefore not only were they used as places of pleasure and relaxation, but also as camp sites, situated at a day's or half a day's ride from each other, almost in the same fashion other rulers built serais or guest houses.⁷⁶ All the gardens conceived, were quadri-partite or composed of four quadrants (not necessarily equal), and in some cases large monuments were even placed at the intersection of the axii or khiyabans (Kabuli Bagh Mosque, Panipat, India; about 1528), thereby complementing the effect. [Figure 29]

The fact that despite all this Babur was merely 'transforming' an alien territory into a more hospitable environment, is evident from the constant comparisons made to familiar cities of Central Asia. That the early Mughals did not feel quite at home in their new territories is evident from Babur's own burial, which occurred in his native Kabul in one of his favorite gardens.⁷⁷

Humayun's long exile from the country (1540 - 1555) in the Persian court of Shah Tamasp, after a precarious start; and his subsequent, albeit brief, return to power in 1555; causes the development of an interesting, though confusing architectural idiom.⁷⁸ He is known more for his larger, urban works (or conceptions), rather than for individual pieces of architecture. Humayun seems to have been rather obsessed with the idea of perceiving cities as 'zones of peace'—thereby calling

⁷⁴. Bernard O'Kane, *Timurid Architecture in Khurasan*, pp. 1ff.

⁷⁵. Zahir ad-Din Muhammad Babur, *Op. Cit.*, pp. 160.

⁷⁶. Catherine Asher, *Architecture of Mughal India*, pp. 20 -21.

⁷⁷. L. Bognadov, "The Tomb of the emperor Babur near Kabul", in *Epigraphia Indo-Moslemica*, pp. 1 - 12.

⁷⁸. James L. Wescoat Jr., "Gardens of Invention and Exile: The precarious content of Mughal garden design during the reign of Humayun (1530-1556 AD.)", pp. 106 - 116.

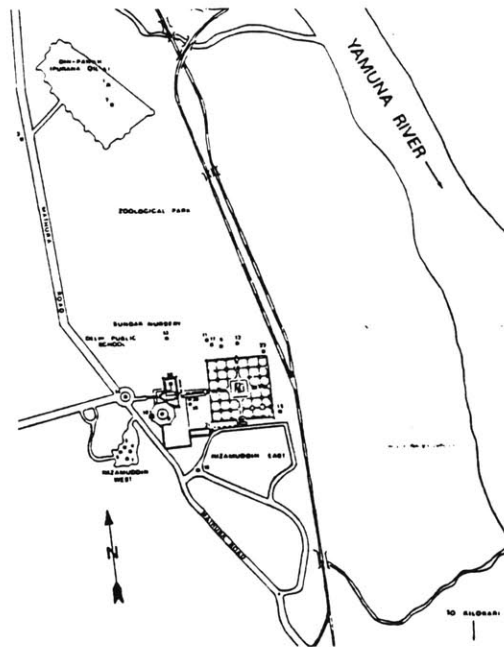
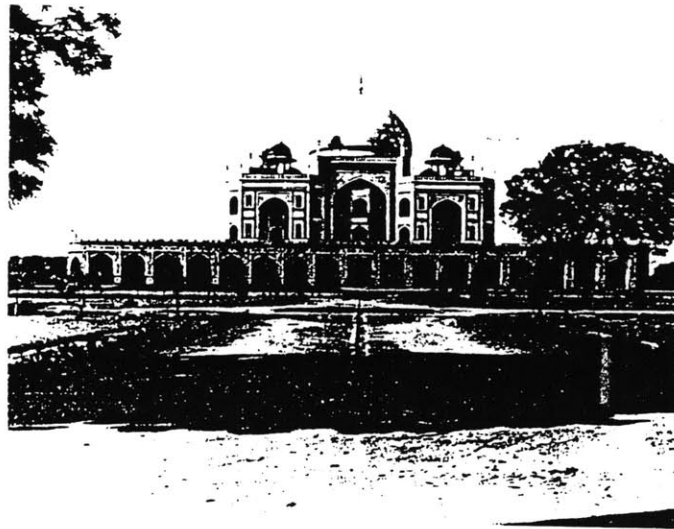


Fig. 30 Humayun's tomb, Delhi. (completed 1571)

Fig. 31 Plan of Humayun's tomb showing its situation within the central square of a nine square garden. Location of the tomb vis a vis the reconstructed city of Dinpanah.

one as Din-Panah or Abode of Peace (1534, Delhi region) and the other as Jannatabad, or the Abode of Paradise (1536, Gaur), inherently adopting his fathers mentality at establishing places of 'rest and order' within disorder.⁷⁹ Furthermore, as if to separate him from the early developments in Timurid and Baburid times, he makes the first attempt at using a monument as the organizational center of the city (Humayun's tomb), the spatial module of which seems to delineate a maxi-grid for the development of the rest of the urban structure.⁸⁰ Here one may conjecture that the form and position of the mausoleum within the urban structure, was already conceived to some extent by the emperor before his untimely death. The idea of the 'grid', which belongs more to the domain of land-subdivisions, as in the layouts of gardens or fields, appears within the urban composition for the first time now; and is advanced further by Akbar in his great capital at Sikri.⁸¹ [Figure 30, 31]

One repeatedly questions the 'non-imperial' component of urban development at the time of the early Mughals (namely Babur and Humayun); which would have caused the development of residential quarters within the city. It seems however, that in these initial phases, the planned areas of the urban settlement were mainly populated by the minority, conquering groups comprising the emperor and his various amirs; and that the local, dependent populations possibly lived in more temporary dwellings, clustered around these formal developments. In any case, built structures within the city seem to have provided only part of the royal enclave, and the majority of activities and occasions actually occurred outdoors under special tents. Moreover, cities such as Agra (under Babur's reign), and Delhi (Dinpanah, under Humayun's reign); functioned as positions of power and consolidation, and points to launch fresh campaigns; rather than as complex setups of political and cultural machinery. The city was therefore first and foremost a resting place for the royal camp which was constantly on the move. Babur and Humayun seemingly adhered closely to the philosophy of the nomads, and actually traveled with their material and non-material possessions from place to place to campaign, conquer or annihilate.

⁷⁹. Catherine Asher, Op. Cit., pp. 30 - 33.

⁸⁰. Glen D. Lowry, " Delhi in the 16th Century" in Environmental Design, pp. 7-17 and The Tomb of Nasir-ud-Din Muhamad Humayun, (Doctorate Thesis).

⁸¹. Attilio Petruccioli, Fatehpur Sikri. pp. 69.

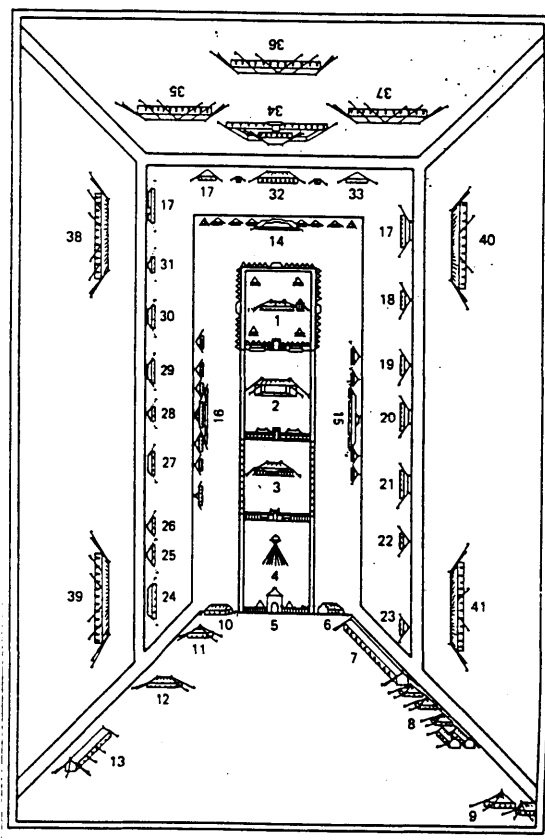


Fig. 32 The emperor's establishment in the imperial camp of the Mughals.

Therefore, until the extensive building projects initiated by Akbar in the 1560's, the Mughals, like their Mongolian ancestors, did not need a fixed base from where to rule. The courts of Babur, Humayun and young Akbar were virtual encampments, which traveled with the emperors; and seem to have been the earliest models for the urban centers of the Mughals.⁸² We have detailed accounts of Akbar's large and lavish mobile court, which was likened to a city on the move, replete with 100 elephants, 500 camels, 400 carts and 100 bearers, furthermore innumerable wooden posts, tents, silken awnings, carpets and ropes⁸³—all ready to be set-up and structured, in order to 'create' the capital. What however seems to clearly differentiate these 'elaborated' developments from their more modest precedents, such as the Mongol 'yurt' or tent, is their sheer complexity in terms of spatial organization, functional arrangement and specificity of building types to perform certain functions. [Figure 32]

Unfortunately however, we know very little about the Akbari camp directly. Composed of perishable materials such as textile and wood, easily transported, the Akbari camp has vanished without a trace; save for textual and pictorial descriptions, which despite being plentiful, as too imprecise to allow a satisfactory reconstruction of the camp plan or the various building types used within it. If however, we were to expand the field of our inquiry to include information about the camps of Babur, Humayun, Timur and his early successors such as Chenggiz Khan, certain formal patterns begin to emerge. Monserrate narrates to us that the overall 'style' of the Akbari camp was in the traditional Mongol manner—an assessment which was perhaps quite accurate, considering that even by Akbar's era, certain fundamental aspects of the Mongol tradition such as militarism and clan-organization, semi-nomadism and associated mobility, were remarkably well-preserved.⁸⁴ Akbar's army for example was organized in the Mongol decimal groupings of 10, 100, 1000 and 10,000 men; his battle tactics were largely steppe-derived; and that many of his court institutions and rituals were rooted in Timurid-Mongol practices. On one significant occasion, he even attributed his tolerance or flexibility in religious matters to the somewhat pagan approach of his forefather Chenggiz Khan. One may therefore

⁸². Alina Macneal, "The Stone Encampment", pp. 36 - 45.

⁸³. Ibid, pp. 36.

⁸⁴. Beatrice Manz, Op. Cit. pp. 5 - 9.

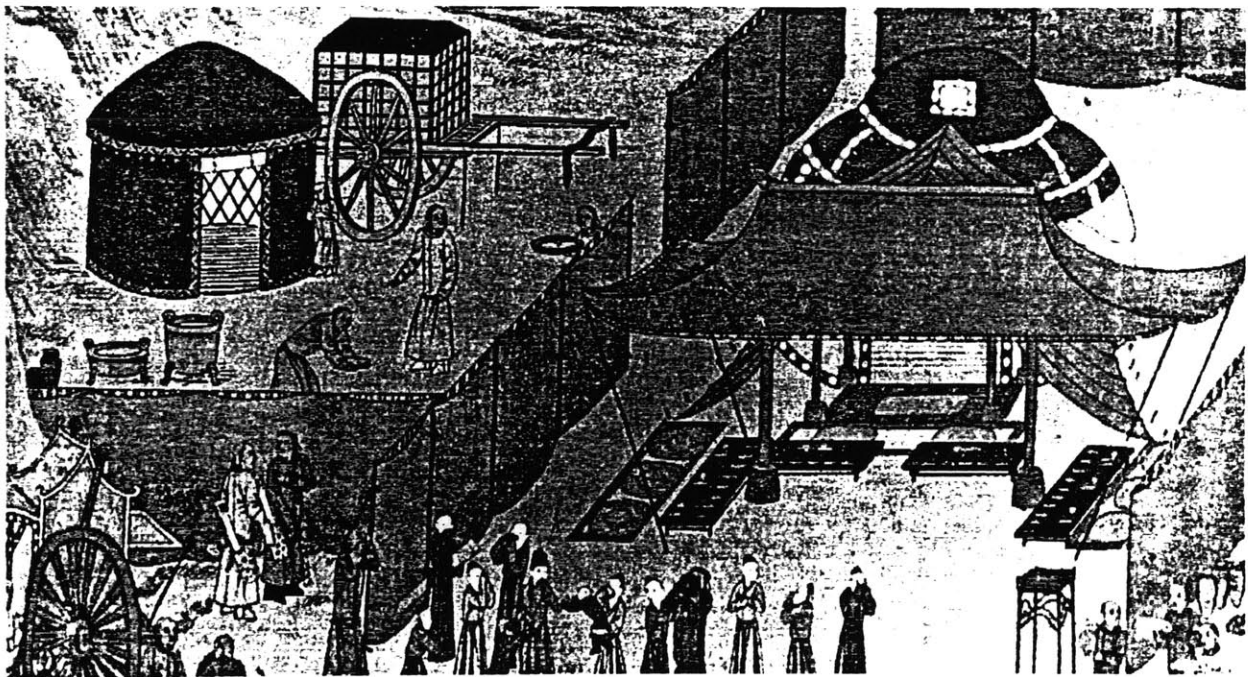
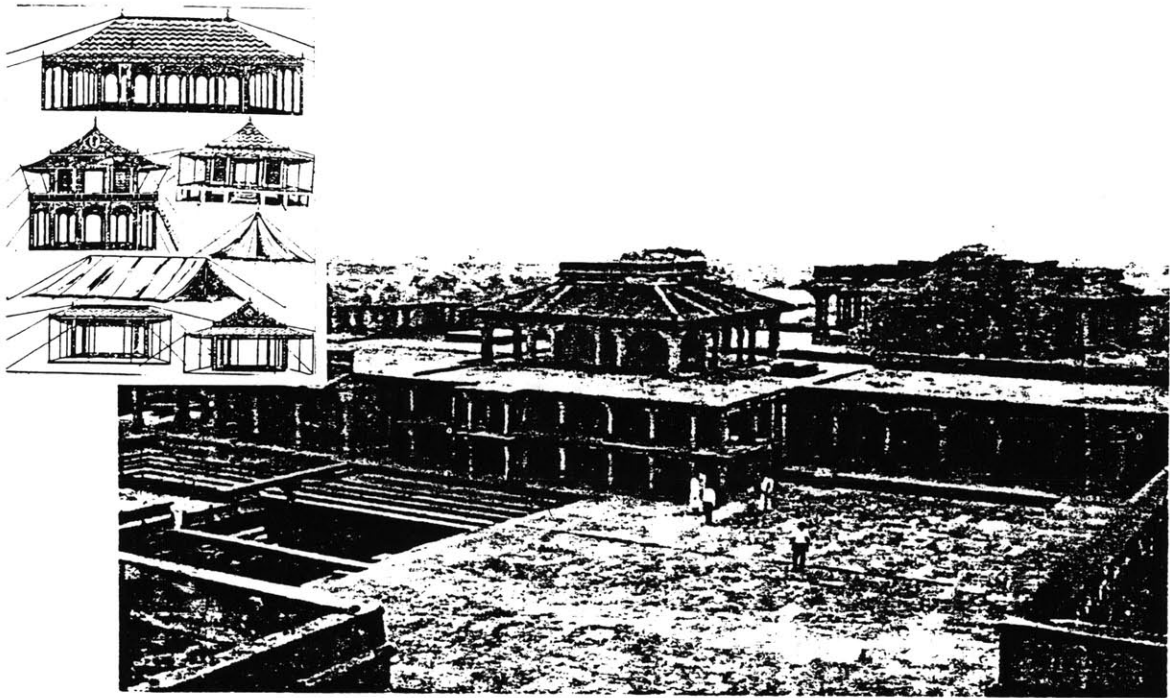


Fig. 33 Different kinds of tents for the use of the emperor and the members of the royal entourage.

Fig. 34 Pavilion (sleeping hall or Khwabgah) located within a courtyard space defined by a one-bay deep arcade. Fatehpur Sikri.

Fig. 35 Nomadic Mongol Camp, 14th Cent. Chinese Scroll, showing individual pavilions located within enclosures made by walls of cloth.

infer that to a significant degree he modeled himself on Mongol precedents.⁸⁵
[Figure 33]

The city of Fatehpur Sikri seems to be the nearest possible emulation of Akbar's encampment and is therefore an important development to be examined. Schematically, the entire complex is low rise in terms of the vertical stacking of masses, whereby significant structures are never used to enclose or define exterior space. Open space is enclosed in the wider sense of the word, thereby providing an immediate context to other free-standing structures, as the Diwan-i Khas positioned within a larger court with perimeter loggias. Moreover, 'such' exterior space is enclosed by articulated walls or at most building mass made-up of single-bay arcades or corridors. This particular characteristic is in some sense typical of a mobile camp, wherein firstly there exists a very subtle difference between the outer open space and the enclosed open space, due to the thin amount of structure/ building mass that separates both; and secondly as we have seen above, the relegation of space-defining function to a wall or screen (of cloth, canvas or silk), is natural for a 'mobile city' where the aim is to control the most space with the least material. The enclosure can be made up of thin substance, with all material and symbolic value invested in the object-like pavilion. All structures described by Abul Fazal as comprising Akbar's camp can be classified as enclosure or pavilion. The 'Gulal-Bar' or seraglio was a wooden screen covered with red fabric, thus emulating an enclosure of sorts; while within it stood the king's 'house of two storeys', the Do-Ashiyana Manzil and an additional number of gabled 'chubins' belonging to his wives. The 'Sara-Parda' made of carpets, and those supported by staked poles, tent types such as the 'khargah' and the 'yurt', and other square, circular and rectangular structures completed the camp. The encampment seemed to have contained no linear or courtyard structures.⁸⁶

[Figure 34, 35]

It seems highly likely that the colossal urban undertakings seen in the completion of Fatehpur Sikri and later in Shahjahanabad, were primarily conceived with a view to the apotheosis of Timurid kingship, now evolving for the first time in India as the embodiment of a vision of universal monarchy, in sharp contrast to the rather unstable traditions of Central Asian tribal leadership exemplified by

⁸⁵. Monserrate, The commentary of Father Monserrate S. J., pp. 75, 173.

⁸⁶. Abu'l Fazl Allami, Akbarnama, pp. 47 - 50, 55 - 57.

the fortunes of Akbar's father and grandfather.⁸⁷ The sheer complexity involved in planning and building the grand camp structure now seems to have brought the Mughals closer to building permanent structures in brick and stone. At Sikri, the persistent use of a linear and spatial modules is obvious, which well qualifies the use of constant lengths of sandstone slabs throughout the ensemble. The smallest and most functional unit of space is essentially one module of a larger space, quite analogous to a similar phenomena in the ordu. Therefore not only were camps (and capitals) easy to build, but still easier to replicate at different locations within the empire.

2.2 The subdivision of the city into three parts or zones — the Citadel (kohandaz, ark, qal'a), the City Proper (shahrestan, shahr-i khas or medina) and the Suburbs or rabad.

On the basis of accurate accounts of the pre-Timurid Iranian Islamic city, (e.g.. Bam), it is possible to reconstruct the schematic appearance of the Timurid city to some extent.⁸⁸ The city was clearly divided into three concentric parts or zones—the innermost one of these being the walled 'hisn' or citadel, which rose high above the surrounding development, and housed the palace and residential quarters belonging to the Amir, the state treasury, arsenals and stores, stables and other offices performing administrative functions, and finally a musalla space or a mosque. The 'circumvellated inner city', which held this citadel at its center followed next, and was termed as the 'qal'a' or the 'shahrestan'. In medieval Bam and Herat, and convincingly enough in Samarqand and Bukhara too, this qal'a or Shahrestan area contained most of the residential quarters belonging to the ordinary populace of the city, the Friday mosque and the bazaars. In Bam, the 'Nahr-i Shahr' would pass through this area; and similarly in Samarqand, the 'Joyi-Arziz' would pass through the Shahrestan. Beyond this area lay the 'balad' or the outer circumvellated city, which too was walled, as if creating a second line of defense. Finally on the outer periphery lay another area, called the 'basatin' - composed of large gardens and garden estates belonging to the nobility and the

⁸⁷. Hambly, Gavin. "Towns and Cities: Mughal India", in *The Cambridge Economic History of India*, Vol. 1, pp. 445.

⁸⁸. Heinz Gaube, *Iranian Cities*, pp. 104 -109.

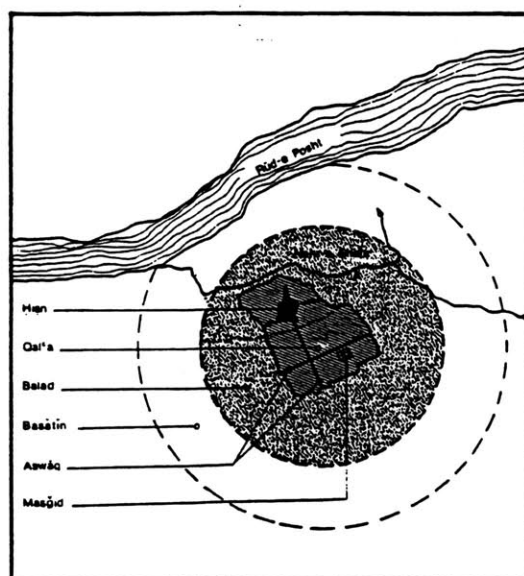


Fig. 36 The tripartite subdivisions of the medieval Bam along the Rud-i- Posht.

amirs of the court. In this region and beyond it lay the agricultural and farm land which functioned as the hinterland of the city. [Figure 36]

Most extant examples of Timurid cities—Samarqand, Bukhara, Shahr-i Sabz and Herat, seem to have incorporated the characteristics mentioned above to varying degrees of complexity, whether or not they were the result of fresh interventions on pre-existing urban structures, or were wholly new developments at significant locations. The urban sprawl of Samarqand for example, is described by Clavijo, in 1403, in the following words:

"Samarqand stands in a plain and is surrounded by a rampart or wall of earth, with a very deep ditch. The city itself is rather larger than Seville, but lying outside Samarqand are great numbers of houses which form extensive suburbs....The township is surrounded by orchards and vineyards, extending in some cases to a league and a half or even two leagues beyond Samarqand which stands in their center. In between these orchards pass streets with open squares. These are all densely populated and here all kinds of goods are on sale with bread-stuffs and meat....The population without the city is more numerous than the population within the walls. Among these orchards outside Samarqand are found the most noble and beautiful houses and here too Timur has his many palaces and pleasure gardens.....Through the streets of Samarqand, and through its gardens outside and inside, pass many water-conduits and in these gardens are the melon-beds and the cotton-growing lands....On the one part of Samarqand stands the Castle which is not built on a height, but is protected by deep ravines on all its sides; and through these water flows which makes the position of the castle impregnable....Within its walls Timur holds in durance and captivity upwards of a thousand workmen; and these labor at making plate-armor and helms, with bows and arrows, and to this business they are kept at work throughout the whole of their time in the service of his Highness. "89

On quite similar patterns developed the city of Bukhara, which in 1558 was described by Anthony Jenkinson in the following manner—

"This Boghar is situated in the lowest part of all the land, walled about a high wall of earth, with diuers gates into the same: it deuided into 3. partitions, where of two parts are the kings, and the 3. part is for merchants and markets, and euery science hath their dwelling and market by themselves. The Citie is very great, and the houses for the [most] part of earth, but there are also many houses, temples and monuments of

⁸⁹. Clavijo, *le Strange* (tr.), *Op. Cit.*, pp. 285 - 286, 289 - 290.

stone- sumptuously builded and gilt, and specially bathstones so artificially built that the like thereof is not in the worlde. There is a little Riuer running through the middle of the said citie, but the water thereof is most vnholosome.... The King of Boghar hath no great power or riches, his reuenues are but small, and he is most maintained by the Citie."⁹⁰

In 1506 an aristocratic party set out for a picnic or reveling in the foothills overlooking Herat would have seen the oasis divided into distinct zones. The inner, walled city, with the cemeteries and baghs immediately outside its walls, could be seen only as a tightly packed mass. The long turquoise strip of Khiyaban with its immense religious buildings and massive tombs gained clarity as it reached out towards the mountains. An outer ring of baghs and palaces occupied the middle foreground, and immediately below the takhts along the Gui-i Soltani rose the tombs of the Maqbare-i Gazorgah. The concentric zones of Herat's development enclosed the pre-Timurid city within the property and preserves of these spectators. In their elevated pavilions they were comfortably distant from the crowded city and insulated from the political and religious affairs of Khiyaban. Moreover, they were raised immediately above the estates that represented their security and happiness in this world, and the tombs, echoing with the verses of the Quran, that guaranteed their security and happiness in the next world, where the earthly garden would be exchanged for a paradisiacal one.

Such a notion or development in Herat, in the words of Terry Allen, was perhaps not the original viewpoint, and it did not develop by chance. The Timurid Sultans created both the view and the viewpoint by applying conceptions of the city that date back to Timur's age and probably beyond. ⁹¹

The Timurid urban context (and especially under Timur and his immediate descendants), seems to have been a rather peaceful world- a characteristic which is clearly reflected in the physical structure of the cities of the vast empire. Almost all known examples had the essential requirements of a fortified city, in terms of a citadel and an outer fortified township; but strangely enough a large part of the urban populace lived beyond the walled precincts—and rather comfortably so. Even members of the nobility preferred to build exquisite

⁹⁰. Anthony Jenkinson, *Early Voyages and Travels to Russia and Persia*, pp 83.

⁹¹. Terry Allen, *Op. Cit.*, pp. 46.

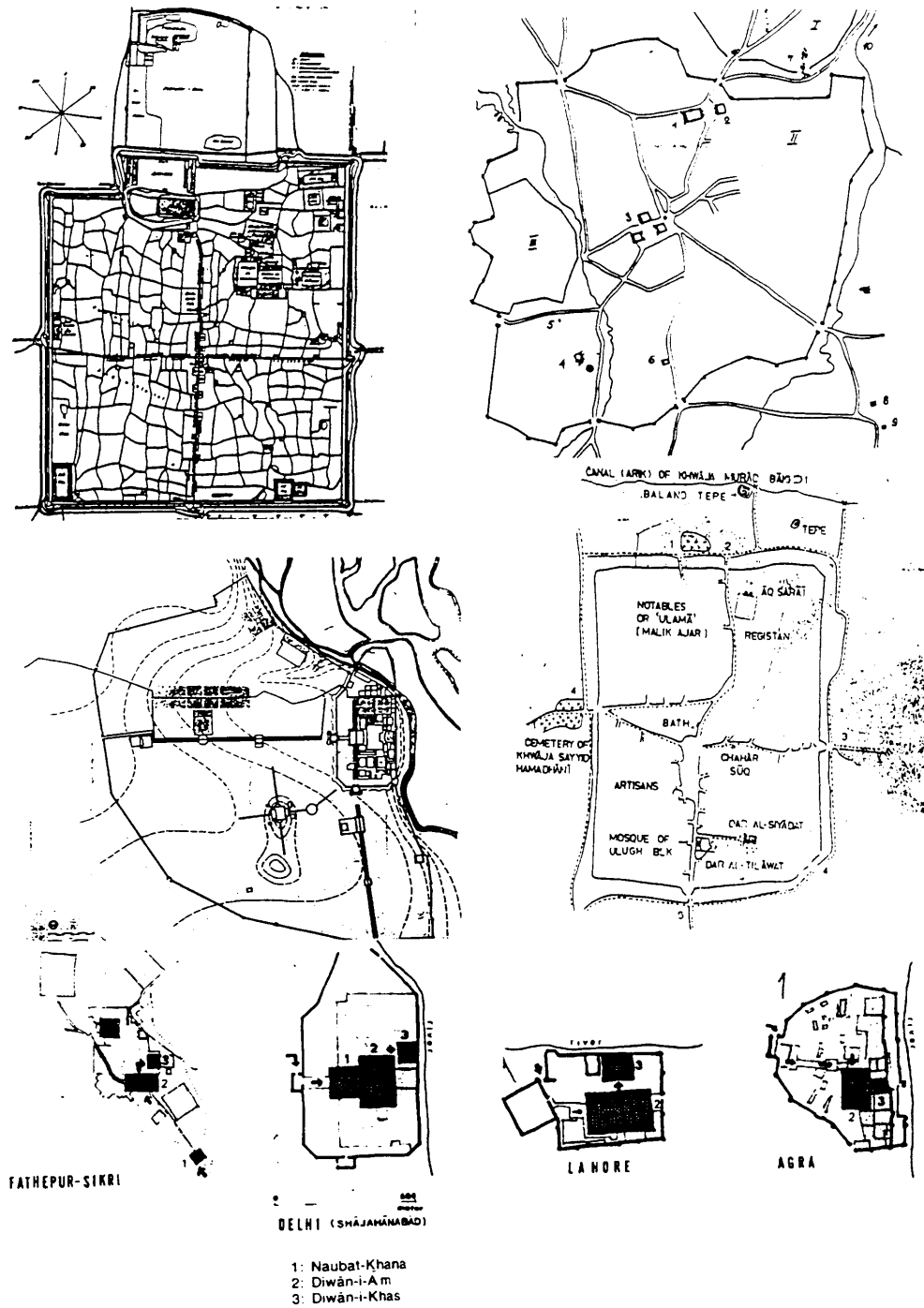


Fig. 37 Comparative Plans showing tripartite divisions of spaces in the Timurid and Mughal City—the citadel, the inner city and the suburbs. Samarqand, Bukhara, Herat, Lahore, Shahjahanabad and Agra.

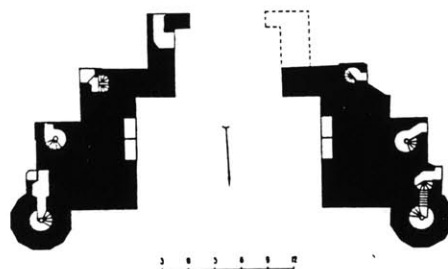
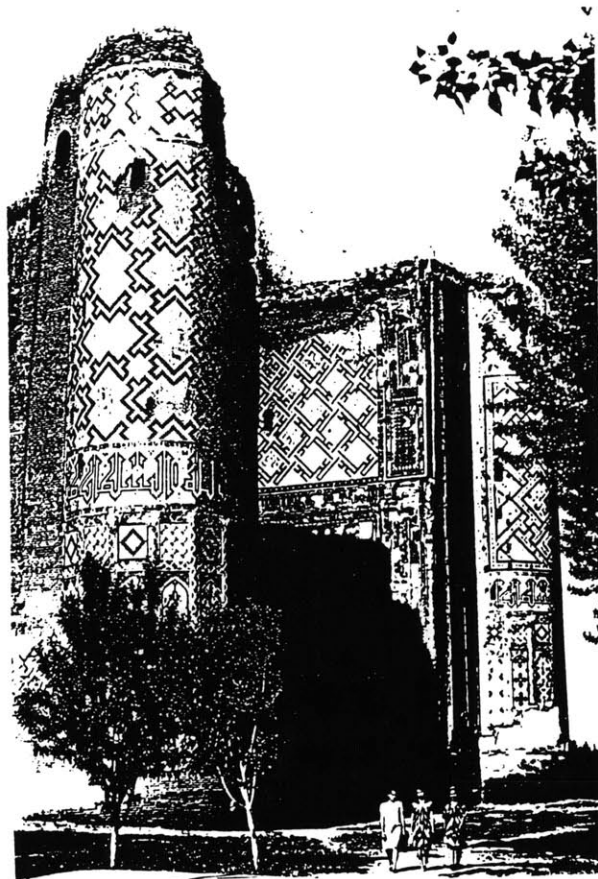
structures and institutions on the peripheries of the city. Therefore, the relative density of primary elements in the city seems to have been greater on the urban periphery rather than in its center—an almost complete reversal from the earlier examples such as Samarqand.

The Mughal city adopted the basic features of the Timurid city such as the schematic positioning of the citadel, the inner city, the perimeter wall and the suburbs, with some modifications. At Lahore, Agra and Shahjahanabad the large majority of the upper echelon of the Mughal social strata actually returned back to the confines of the urban walls in order to establish their dwellings. Moreover the citadel seemed to have moved towards the city wall in a manner such that it now wholly fronted a river or other water body. The inner city or the shahrestan was embellished with large public institutions, formally designed streets and urban spaces. As if to correspond to the return of the elite to the city interior, gardens were incorporated on a very large scale within the city, while on the periphery or in the suburbs they began to function more as mausoleum gardens. [Figure 37]

2.3 The delineation of the primary structure of the city by means of grand/formal ensembles, in contrast to the more secondary structure (position) relegated to the residential fabric

The largest and the most important of all the Timurid cities, namely Samarqand and later, Herat—were created as a set of serial interventions on dense, pre-existing urban skeletons. The Mughals as if took inspiration from these precedents, and used a similar process for urban development in Lahore, Agra and Shahjahanabad; thereby lending a special character to the nature of the urban fabric in each example.

Buildings conceived in the Timurid urban setting, and beyond it as well—particularly those built by members of the nobility, seem to have largely relied on their physical or relative separation from surrounding structures, in order to enhance their importance and presence. The obvious observation which strikes one here is the relative contrast in scale between the primary elements or main monuments positioned within the urban structure and the surrounding residential tissue. The most conspicuous formal characteristic among all the



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Fig. 38 The Palace Aq Saray, Shahr-i Sabz—detail of entrance portal, decoration and plan.

monuments in Samarqand is their sheer size and bulk, designed to awe the onlooker with the full intent of Timur's power and might. [Figure 38] The staggering bulk of the ruins of the Aq-Saray palace at Shahr-i Sabz - Timur's most sumptuous residence - alone convey this forceful impression, and even Babur was sufficiently impressed by them to write "... few iwans so fine can be shown in the world." Pope describes them in the following words—

" In plan, the building was somewhat novel for the period, with a triple-iwan facade reminiscent of Firuzabad. The portal arch itself was 165 feet high, flanked by a pair of round towers, like minarets, rising out of a twelve-sided base. The central iwan opened into a huge marble-paved court at right angles to the entrance. On the opposite side, another great iwan led into a large reception hall.... The huge rear wall of the reception hall was covered with the finest mosaic faience in quietly fluctuating tones of turquoise, lapis, milk-white, mirror-black, green and aubergine; all embellished with gold. Such an expanse completely covered with many strong and varied patterns could have been intolerable, but the opulence was organized and controlled by a firmly designed geometrical framework of harmonious proportions. The contribution of each panel is carefully appraised and apportioned with sensitive regard for the total effect.... It was a perfect expression of Timur's imperial power and pride, fortunately formulated and controlled by Persian aesthetic genius and experience."⁹²

Similarly, the entrance portal of the Bibi Khanum mosque, possibly never quite completed, owing to Timur's insistence that it be rebuilt higher, is almost as striking in the same respect. Clavijo was in Samarqand when the mosque was under construction:

"The mosque which Timur had caused to be built....seemed to us the noblest of all those we visited in the city of Samarqand, but no sooner had it (the mosque) been completed that he began to find fault with its entrance gateway, which he said was much too low and must be forthwith pulled down. Then the workmen began to dig pits to lay the new foundations when, in order that the piers might be rapidly rebuilt, his Highness gave out the order that he himself would take charge to direct the labor for the one pier of the new gateway; while he laid it on two of the lords of his court, his special favorites, to see to the foundations of the other part. Thus all should see whether it was he or those other lords who first might bring this business to its proper conclusion....Timur was

⁹². A. U. Pope, *A Survey of Persian Art*, pp. 193.

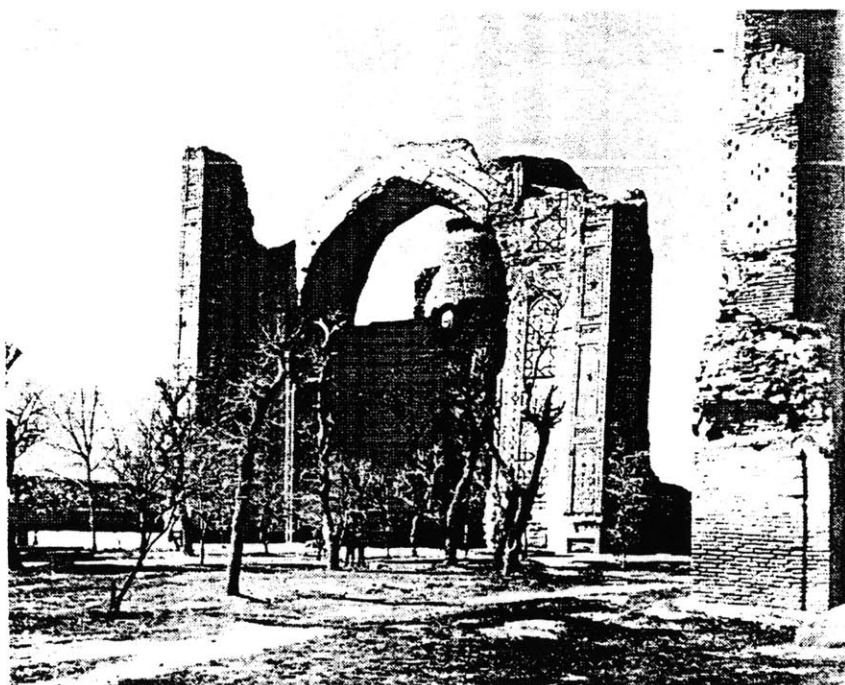
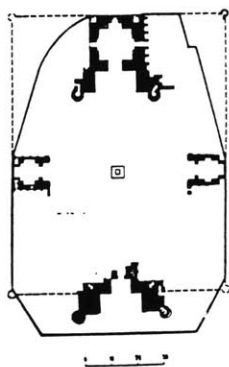
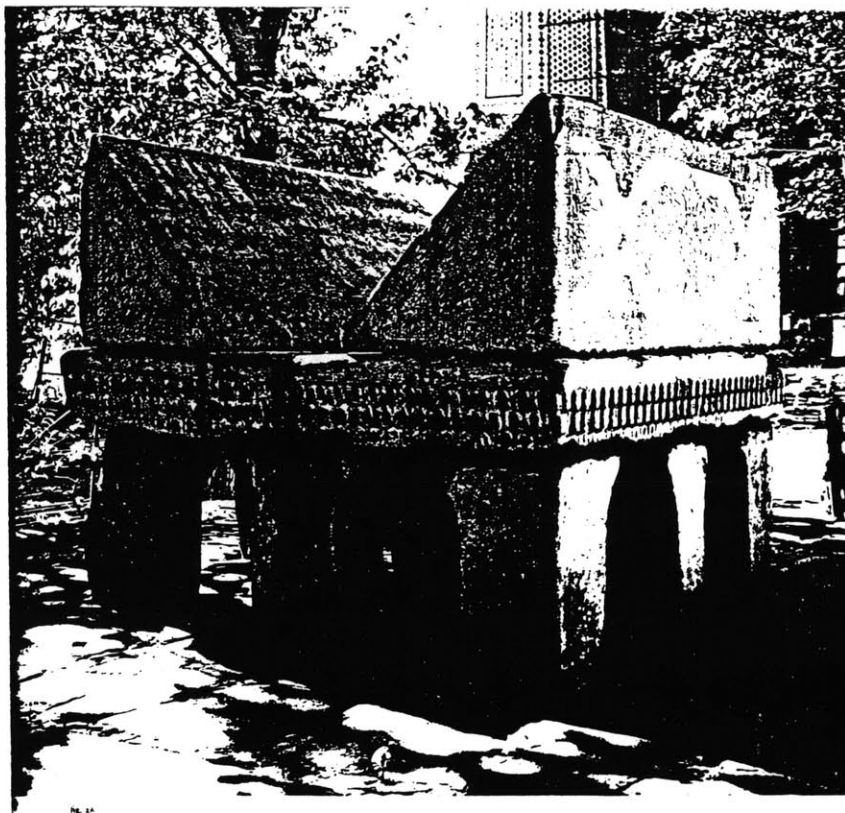


Fig. 39 The Bibi Khanum Mosque, Samarkand—detail of plan, quibla iwan and gigantic Koran stand.

already weak in health, he could no longer stand for long on his feet, or mount his horse....It was therefore in his litter that every morning he had himself brought to the place, and he would stay there the best part of the day urging on the work. He would arrange for much meat to be cooked and brought and then he would order them to throw portions of the same to the workmen in the foundations, as one should cast bones to dogs in a pit....and he even with his own hands did this. Thus the building went on day and night until at last came the time when it had perforce to stop—on account of the winter snows, which began now constantly to fall.”⁹³

Timur's greatest desire as a monarch was to attach all the possible superlatives to the name of his famous capital at Samarqand. He wanted the greatest, the highest, the longest, the most impressive and beautiful buildings ever conceived to adorn his city. Correspondingly, Timur's ambitious building program in the city was one of continuous commissions to architects and designers, most of whom designed in complete oblivion and disregard for situations on site. The usual results were therefore regularized, geometrical prismatic masses, mostly symmetrical in disposition; with elaborate, dazzling exteriors and facades. Buildings were viewed more as pieces of sculpture rather than as objects associated to the residential fabric; and therefore structural and design innovations were often used to exaggerate their overall dimensions—foremost among these being the use of blind galleries to add height to the entrance pishtaq, the quibla iwan and the side galleries; and the use of the raised cylindrical drum to support the outer dome as against the shallower inner one. [Figure 39]

Most significantly however, on the urban scale, special efforts seem to have been made to create urban spaces on an unprecedented scale. These urban spaces too contrasted dramatically in size, scale and proportions when compared to the tighter, more introverted spaces found in the residential tissue. These monumental edifices were either placed within these spaces as 'island' buildings, or became part of larger ensembles or building groups which 'contained' space within them.

In the later part of Timur's reign, and more so in the period of the late Timurids - this tendency to create the architectural ensemble as a tool towards making

⁹³. Clavijo, *le Strange* (tr.), *Op. Cit.*, pp. 280.

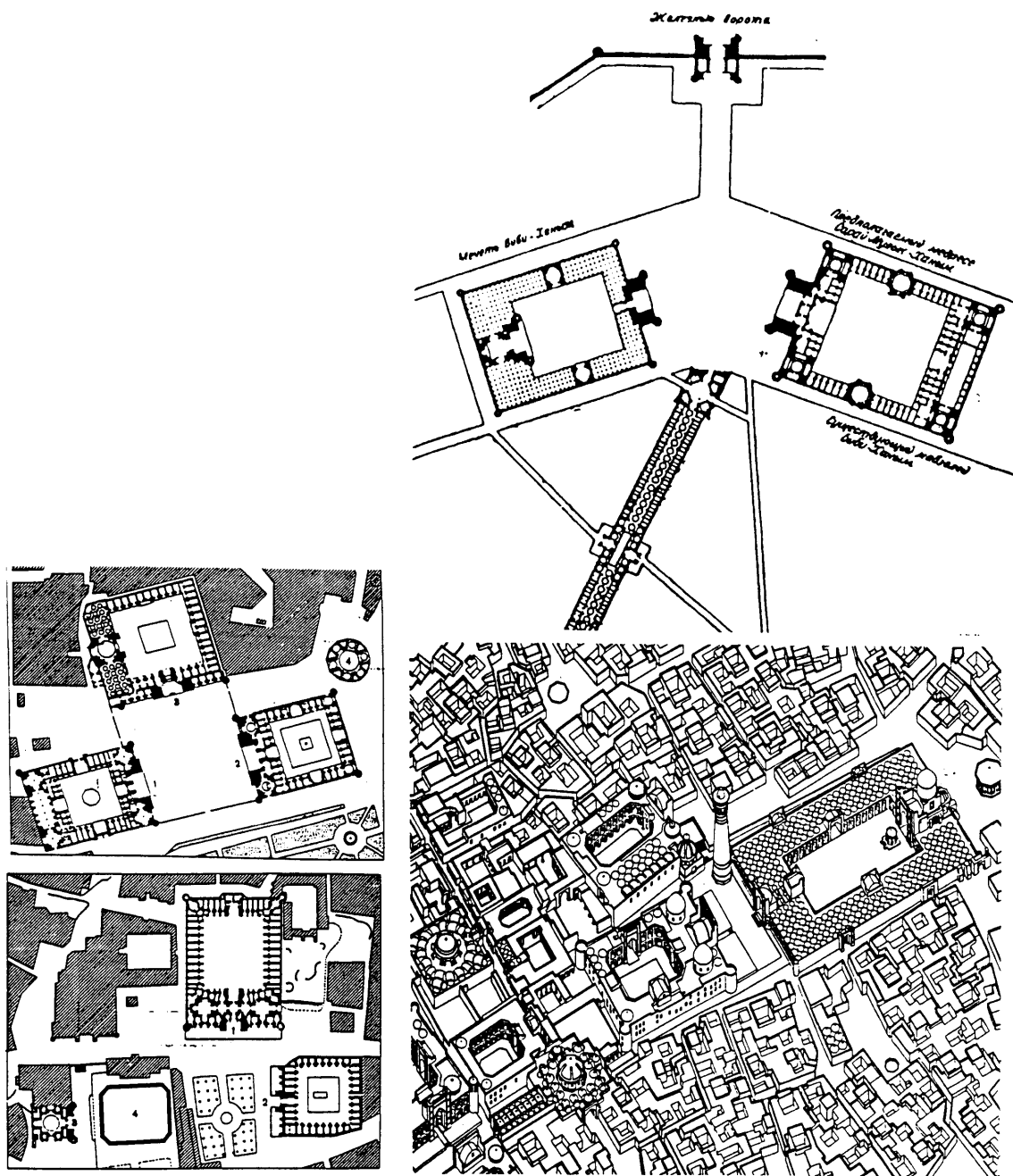


Fig. 40 Kinds of Kosh Ensembles: The Registan Square, Labi Hauz, Kalan Mosque Square, Bibi Khanum Mosque and Madrasa Square

urban space gained more popularity and greater sophistication. Contemporary architects during this era thought in terms of city planning and were cognizant not just of the single structure about to be built, but rather of that structure as it would appear in its architecturally pre-mediated setting.⁹⁴ Hence the sheer variety of ensemble treatments developed.

The simplest of these was the 'Kosh' ensemble, represented by two diverse compositional, yet reciprocally balanced and axially-aligned structures which were separated by a street or a small square; for instance Timur's great mosque-the Bibi Khanum and the Seray Mulk Khanum Madrasa in Samarqand provide the most striking example of this scheme. Both buildings stood on opposite sides of the principal bazaar street, enclosing between their entrance iwans a large public space, which till date functions as the spill-over of the near-by bazaar. A variation on this theme is represented by two buildings integrated by a common courtyard, as in the Muhammed Sultan Madrasa and Khanqah (the Gur-i Mir complex) in Samarqand. Here however, in contrast to the previous example, the space is more formalized. A more typical treatment is represented by ensembles axially aligned along the main thoroughfare to the buildings along the street, e.g. main market alleys flanked by rows of mutually integrated vaulted and domed galleries or lean-to sheds that form a unified interior. The ensemble of Labi-Hauz and the Shahrud Canal in Bukhara are other examples of this process. In the 15th to the 17th centuries, this big reservoir (hauz), became surrounded by three monumental buildings: the madrasa Kukaldash, the Caravanserai Nadir Diwan Begi (later madrasa), and the Khanqah, the house for the reception of the dervishes of Nadir Diwan Begi. In older times several chaikhana and trading houses were situated around it, and water carriers collected drinking water from the hauz.. [Figure 40]

The 15th century saw the development of more advanced combinations of monumental structures of diverse architectural treatment, such as the Registan in Samarqand, completed under Ulugh Beg. The Registan square is defined by the Ulugh Beg Madrasa and Khanqah, Mirzoi Caravanserai, Kukeldash great mosque, Mukatta mosque, water pool, a nearby marketplace - Tim-Tuman-Aka and the Hammami Mirzo bath house. The creators of the Registan apparently

⁹⁴. G. P. Pugachenkova, *Op. Cit.*, pp. 144 - 158.

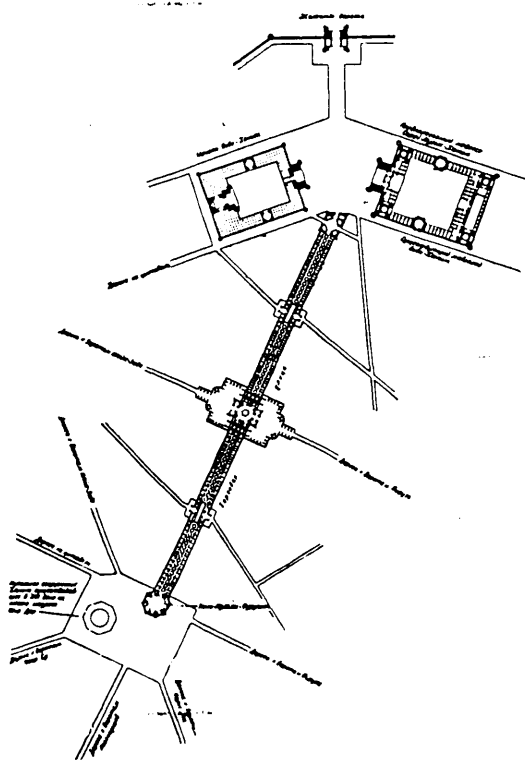


Fig. 41 Reconstruction of the Samarqand commercial suq in the 15th century (After Ratija) showing covered bazaar extending from Chahar Su pavilion to the Bibi Khanum Mosque/Mausoleum Kosh, and finishing at the Akhuni Darwaza.

worked on the idea of the city as world capital and asserted a new notion of large-scale city planning. Providing the focal point to the city's commercial area, the Registan loomed high above the endless maze of matchless combinations of the city views in a spectacular vision open to both close-up and distant view.

These ensembles functioned primarily as points of emphasis or poles in an otherwise consistent urban fabric. Their sheer size and bulk, shape, form and external finish caused them to be seen as 'permanencies' vis a vis the residential fabric which was compact, dense, low-rise and composed of more temporary materials such as mud and timber. Additionally, there also seems to have been a secondary role which these monuments played in the 'regularization' of the urban fabric. Typically, as part of this process, the 'edges' along the entire lengths of certain streets and squares—such as the main suq in Samarqand, the Bibi Khanum/ Saray Mulk madrasa, and its extension towards the Akhani Darwaza—were covered or 'dressed' with a formal built structure about one or two building-bays deep and equally high; which seemed to conceal or accommodate the irregularities of the urban fabric behind it. Such acts of formalization and geometrization of the urban tissue, reportedly met with intense opposition, as most such schemes necessarily required the rather unsympathetic, demolition of parts of pre-existing tissue.

For instance, in the Registan at Samarqand, the intersection of the main arteries was originally covered by a domed bazaar, built in Timur's time or after him. [Figure 41] This is how Clavijo saw the beginnings of the ambitious project:

“Every year in the city of Samarqand much merchandise of all kinds came from Cathay, India, Tartary and from many other quarters, but there was as yet no place within the city where it might be stored, displayed and offered for sale. Timur therefore gave orders that a street should be built to pass right through Samarqand, which should have shops on either side of it.... and this street was to go from one side of the city through to the other side, traversing the heart of the township. The accomplishment of his orders he laid on two of the great lords of his court, letting them know that if they failed in diligence, their heads would pay the penalty. These nobles therefore began at speed, causing all the houses to be thrown down along the line of the new street. No heed was paid to the complaints of the persons to whom the property here might belong, and those whose houses thus were demolished suddenly had to quit with no warning, carrying away with them their goods and chattels as best they might. No sooner

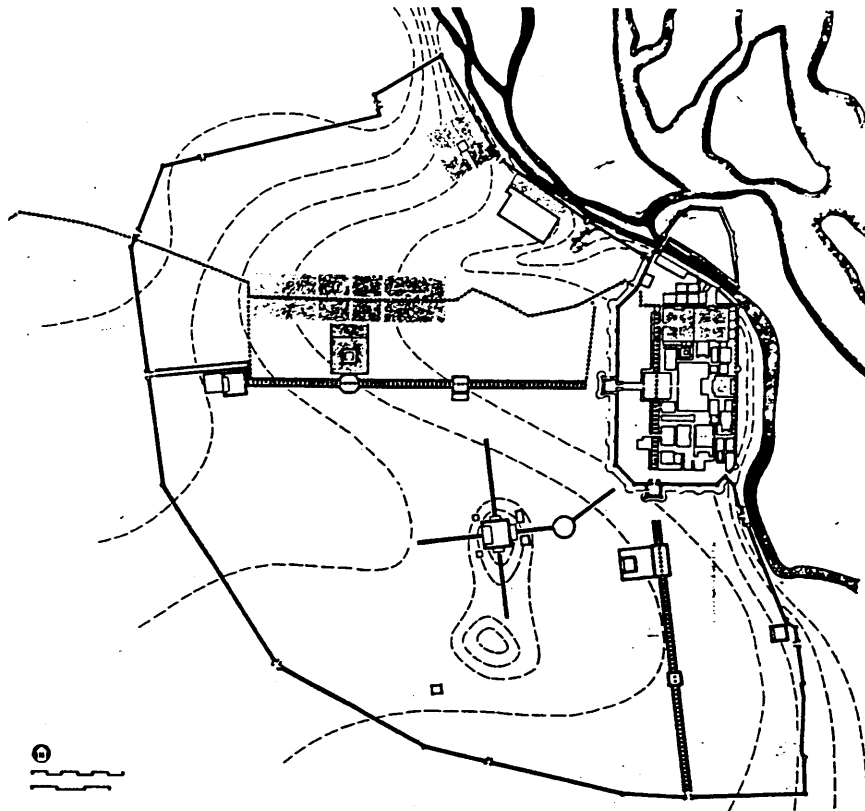


Fig. 42 Shahjahanabad, designed infrastructure and monuments of the city.

had all the houses been thrown down than the master builders came and laid out the broad new street, erecting shops on the one side and opposite, placing before each a high stone bench that was topped with white slabs. Each shop had two chambers - back and front, and the street way was arched over with a domed roof in which were windows to let the light through.... Thus in the course of twenty days the whole street was carried through: a wonder indeed to behold. But those whose houses had been demolished had good cause to complain."⁹⁵

Similarly, the Mughal sovereign city of Shahjahanabad was the distinctive model of urban structure dependent on an autocratic or absolutist state organization for its delineation, with the emperor in the supreme position of power. The citadel-fortress became the principal focus of the city and all linkages emanated radially from it. The citadel fortress connected to an armature of cross-axial streets oriented to the cardinal points was the formal structure of the city, accentuated at certain locations by the presence of public institutions. The residential fabric, wherein resided the common populace was relegated to a second position, in comparison to the more demonstrative nature of the formal structure. Therefore, similar to the case of the Timurid/ Central Asian city, the monuments in the Mughal city actually 'read' as seemingly scattered and self-sufficient points within an otherwise homogenous, tissue matrix. [Figure 42]

⁹⁵. Clavijo, *le Strange* (tr.), *Op. Cit.*, pp. 279.

3.0

THE AGENTS OF CROSS-CULTURAL TRANSFER AND EXCHANGE

The formal and spatial similarities observed between the Timurid and the Mughal city lead one to examine another pertinent facet related to the discussion, which could be instrumental towards an acute understanding of how the notion of an urban model, of the residential block or 'mohalla', and the dwelling unit actually persisted across an extended cultural sphere. This would basically be an examination of the causative agents which were responsible for the occurrence of this cross-cultural exchange between Timurid Central Asia and Mughal India. This thesis suggests that three possible agents operated in this process, namely the Mughal nobility and associated royal entourage; court intellectuals and scholars, architects and builders; and finally mass-movements of foreign or displaced populations moving from one location to another.

The social group labeled as the Mughal nobility within the urban context seems to have played a primary role—this included the Emperor and his extended household, the notables and amirs of Mughal society, and other close members of his entourage. As an initial reference, one must delineate that a large percentage of these people were immigrants from Khorasan and parts of Central Asia, or direct descendants of the military commanders who had served Babur on his Indian expeditions or other Timurids before him.

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Similarly, court intellectuals and scholars, and occasionally entire families of architects or building designers, seemed to have moved from areas beyond the north-western frontiers of India to the larger urban centers in the Mughal domain, in pursuit of better opportunities available at the affluent Mughal courts as against the rather unstable political situations prevalent in Central Asia and eastern Iran. The collapse of the last Timurid ruler in Herat in 1507 at the hands of the Shaibanids was in fact the precursor for such a situation. This group of people seemed to have played a definitive role in the transfer of architectural concepts, ideas and the images of buildings and cities.

The third contributory factor seems to have been the influx of foreign populations from one geographical locale to another. Entire social sub-groups or tribes migrated from one place to another, in response either to the perennial needs of new pasture lands and new oasis sites; or for reasons of trade and occupations, and frequently in response to political persecutions by powerful rulers. Since the reign of Timur, and even in the reigns of his late successors, nomadic and sedentary populations had been habitually and often deliberately inter-mingled, in order to create a more homogenous social milieu.⁹⁶ Such a practice was continued in the era of the Mughals, mainly in response to the perpetual needs of the imperial army to hire armed, trained mercenaries in order to swell their ranks.⁹⁷

Since the main thrust of this paper is directed towards the definition of the urban settlement, one may regard the first two factors or agents I have mentioned as

⁹⁶. Beatrice Manz, Op. Cit. "...With the rapid acquisition of new regions after 1209 AD, Chinggis had to control an ever growing dominion of varied population from Turkic and Mongolian nomads to the settled populations of Iran and Northern China. In order to accomplish this he developed a system which moved individuals and frequently entire populations thousands of miles from their place of origin; thereby settling Persians in China and nomads deep in settled territories. In the cities of the conquered regions he stationed military governors, mostly of Inner Asian provenance, with Mongol militias. As if to further secure unity and control within his realm he garrisoned the settled regions with separate elite units (tamma) drawn usually from a number of different tribes and areas and representing the whole of his army. At the same time, Chinggis made good use of the expertise of Chinese and Iranian bureaucrats in the administration of his realm: and a few of these men actually rose to positions of great power over regions far away from their native lands and wielded influence in the central administration. In this unique way he began opening of horizons and the mixing of sedentary and nomad populations which wrought a profound change in the social structure of Eurasia during the Mongol period...." pp. 14.

⁹⁷. William Irvine, The Army of the Indian Mughals: Its Organization and Administration, pp. 36 - 44. Also see Rita Joshi, Op. Cit., pp. 1 - 20 and pp. 184 - 197.

having contributed largely towards the making of the formal structure of the settlement similar to its Timurid counterpart and towards the enhancement of the overall image of the dynasty in the subcontinent in terms of building achievements. A conscious emulation, even imitation of familiar structures and compositions, was coupled with the capacity to actually harness resources towards the realization of such whims and fancies—as was often the case with the affluent urban, upper class—who belonged to this social category. On the other hand, the movement of migrant groups and sub-tribes, actually caused the replication of the 'house type' across geographical distance and the consequent similarity in the nature of the residential sectors within the formal, urban skeleton—largely the result of the former process.⁹⁸

3.1 The Elites and Notables of the Mughal gentry—Amirs and Courtiers to the Emperor

The large number of Khorasanian and Samarqandi begs, military commanders and amirs who had accompanied Babur on his Indian expedition, found Hindustan to be an inhospitable place and wished to return to their native lands after the conquest was over and Babur was proclaimed padshah in Agra. Discontent and rebellion seemed to mount in his army for certain reasons, foremost among these being the physical conditions prevalent in the country, such as the extreme climate which caused great heat, incessant rains and unfriendly winds. The lack of familiar institutions in urban and social life, such as family-structures and residential neighborhoods; or mosques, madrasas, hammams and chai-khanas—was particularly telling. As Babur narrates in the Baburnama:

“..... It was in the hot season when we came to Agra. All the inhabitants (khalaïq) had run away in terror. Neither grain for ourselves or our horses was to be had. The villages, out of hostility and hatred to us had taken to thieving and highway-robbery; [therefore] there was no moving on the road. There had been no chance, since the treasure had been distributed,

⁹⁸. Manu Sobti, "The study of the dwelling unit within the Residential Quarter and its variations in the cities of Samarkand and Bukhara, Central Asia.", Aga Khan Travel Grant Reports, pp. 1 - 4, 1993.

Table 5 *Great amirs (2500–7000 zat): 1658–1678*

1 Country of birth	2 Group	3 Subgroup	4 Relative in mansab-dari system
India 137	Indian 73	Indian	Father 94
Iran 16	Irani 64		Brother 5
Turan 6	Turani 33	Rajput 24	Grandfather 4
Turkey 2	Unknown 9	Shaikhzada 18	Uncle 2
Balkh 2		Afghan 14	None 74
Badakshan 1		Maratha 13	
Bukhara 1		Other Hindu 13	
Unknown 14		Zamindar 22	
		Deccani 16	
Totals 179	179		179

Source: Athar Ali, *Mughal Nobility*, pp. 175–214

Fig. 43 Great Amirs in the city of Shahjahanabad (2500 - 7000 zat): 1658 - 1678.

to send men in strength into the parganas and elsewhere. Moreover the year was a very hot one; violent pestilential winds struck people down in heaps together; masses began to die off....."⁹⁹

The members of the royal household, the great amirs, begs and army commanders who stayed back in Hindustan following Babur's example, shall be the center of this discussion. Most, if not all of these men, constituted the elite or notables of Timurid society, and hailed from various parts of the Islamic world, mainly eastern Iran and Transoxiana; though in later periods a substantial proportion did come from the subcontinent itself. A sizable number of individuals among the begs and amirs were actually related to the royal family by blood-ties, clan or ethnic origins; thereby creating in some sense an extended-family structure or a patrimonial-bureaucratic structure of society. [Figure 43]

The relatively direct role of the Mughal nobility in this process was owing to the fact that they constituted one social strata among all others, who remained relatively unchanged owing to the vicissitudes of time. The migration to a different geographical locale did not cause noticeable changes in their social and political structure. Almost all of them actually emulated the lifestyles they were accustomed to in their native Samarkand, Bukhara, Ferghana or Herat. Babur's garden and residence on the river bank at Agra was in fact a precursor of how the nobility would build while in India. Their new dwellings therefore were almost entirely based on the designs and layouts of their previous garden estates, except that the relatively more urbane nature of the residential quarters in the Indian context caused them to develop the courtyard as an organizational element which compensated for the garden or orchard.

The nobility also initiated the process in a more indirect fashion, which was dependent on the political influence it still maintained despite the migration from Central Asia. Reaching the high social status of an amir or beg in Mughal urban society required a gradual ascension from a *ichkilar* or ordinary soldier, through the intermediate *yekiltar*; and finally reaching the *beglar* or beg rank. Candidature to the status of *beglar* in the service of the emperor could also be attained by 'pre-existing' begs or foreigners, called *mihman beglars*. These were

⁹⁹. Zahir ad-Din Muhammad Babur, Op. Cit., pp. 524-5.

the begs who had already enjoyed the status of beg under various Timurid and Mongol rulers of Central Asia and Khorasan and joined Babur's service particularly after their own sovereigns had surrendered or had been overthrown.¹⁰⁰ They comprised of different ethnic/ tribal groups such as the Timuri (or Turkoman) begs, the Chaghatai begs, the Mongol begs, the Andijani begs, the Baburi begs and the Uzbek begs.¹⁰¹ This wide class of begs from different origins maintained large groups or garrisons of men from their respective native regions under their control, thereby maintaining a sizable jam'iyat. In many cases such jam'iyats or groups when affiliated to one leader or chief settled in parts of previous cities or established new settlements.

3.2 Intellectuals, Scholars And Architects

The affluent Mughal court invited and sponsored scholars, poets and other men of the book on a fairly regular basis from beyond the north-western frontiers of the empire, thereby creating a forum of discussion and cultural exchange, that encompassed an enormous gamut of fields. Conceptions about the Universe and the Earth, and about Man and the City—from the Safavid and Timurid courts, seem to have freely intermingled with more indigenous interpretations on the same lines.¹⁰² This therefore would have been the most important manner of actually translating buildings into metaphysical concepts of space and form, and of narrating detailed descriptions of buildings and urban settlements in foreign lands. Perhaps the most significant result of this process was the replication of standard building types across these geographically distant cultures. Successive generations of builders and architects seem to have consistently used a 'basic model' when it came to designing palace complexes and mausoleums, or laying-out gardens and garden pavilions. This basic model, as observed on a closer examination, was Timurid in its origins; thereby largely deriving from prototypes still extant in Husayn Bayqara's Herat and Shaibani Khan's Bukhara.

¹⁰⁰. A. R. Khan, "Houses of the Mughal Nobility", *Islamic Culture*, Vol. LX, No. 3, July 1986. pp. 87 - 8.

¹⁰¹. Zahir ad-Din Muhammad Babur, *Op. Cit.*, Vol. 1, pp. 194 and 227.

¹⁰². Stephen P. Blake, *Shahjahanabad: The Sovereign City in Mughal India (1639-1739 AD.)*, pp. 32 - 36. Also see Aziz Ahmed, "Safavid Poets and India", in *Iran* 14 (1976), pp. 17 - 32; Abdullah M. Chaghatai, "A Family of Great Mughal Architects", in *Islamic Culture* 11 (1937), pp. 200 - 209, and Howard Crane, "The Patronage of Zahir al-Din Babur and the Origins of Mughal Architecture", in *Bulletin of the Asia Institute* NS 1 (1987), pp. 95 - 110.

Curiously enough, successive generations of the same family of architects worked for the Mughal emperors and the nobility. This evidently meant that the first level of transfer or transmission of architectural ideas and design concepts about commonly-built structures occurred almost in toto, from father to son and master to apprentice.

The first case in point would be Babur's gardens at Agra, initiated soon after he was crowned padshah or emperor. The underlying schema for all these creations was the quadri-partite chaharbagh, a mental model of Timurid or Khurasani origin, which Babur seems to have repeated consistently. Therefore, even though these structures were crafted and embellished by local Indian craftsmen; in order to insure fidelity to Timurid models, two skilled artisans from Central Asia reportedly came to work for Babur during his campaigns. One of these was Mir Mirak Ghiyas, identified as a stone-cutter in Babur's memoirs, and possibly identical with Mirak Sayyid Ghiyas, the designer of the Humayun's tomb, who came from Herat and owned much land in Khorasan. Ustad Shah Muhammad, the second stone cutter, had first served Babur in Qandahar, and thereafter continued in his services, till about 1529.¹⁰³

The second case would be that of Ustad Ahmad Lahori (1580 - 1649), the chief architect to the Mughal emperor Shah Jahan, who is credited along with a colleague named Ustad Hamid (possibly his brother), to have been responsible for the design of several buildings in the reign of Shah Jahan. These included several prominent structures including the Taj Mahal and the urban complex at Shahjahanabad with its palace-fortress and the Jama Masjid. Lahori grew up and trained probably in Herat and Lahore, and may have worked in the atelier of Abd al-Karim, chief architect to emperor Jahangir. In the *Diwan-i Muhandis*, a collection of poems written by the architect's Lutf Allah, we find mention that the three sons of Ustad Lahori also followed their father's profession, combining architecture, engineering and scholarship. This implies that in the later and more prominent projects of his career, Lahori would have surely been assisted by his sons. In fact at the Jama Masjid at Shahjahanabad we have evidence of calligraphy designed by Nur Allah, the youngest of the three sons, who may

¹⁰³. Ebba Koch, *Op. Cit.*, pp. 43 - 44 and Catherine Asher, *Op. Cit.*, pp. 25. Also see Babur, *Op. Cit.*, pp. 343, 642 and Bukhari, *Mudhakkar-i Adhab*, pp. 37, 103, 283 - 286.

Moinuddin's List of the Builders

<i>NAME</i>	<i>Specialization</i>	<i>Native-Place</i>	<i>Monthly Salary</i>
1. Muḥammad 'Isā Āfandi	Designer and Draftsman	Turkey	Rs. 1000/-
2. Sattār Khān	Calligrapher	Turkey	1000/-
3. Muḥammad Sharif	Draftsman	Samarqand	1000/-
4. Muḥammad Hanif	Supervisor of Masons	Agra	1000/-
5. Amānat Khān Shirāzi	Tughrā-writer	Shiraz	1000/-
6. Kādir Zaman Khān	General Artist	Arabia	800/-
7. Chiranjilal	Mosaicist	Delhi	800/-
8. Baldeodās	Gultarāsh	Multan	690/-
9. Munnoolāl	Inlayer	Lahore	680/-
10. Jumnādās	Inlayer	Delhi	680/-
11. Abdullah	Mason	Delhi	675/-
12. Bashārat 'Alī	Inlayer	Delhi	632/-
13. Bhagwāndās	Inlayer	Multan	630/-
14. Muḥammad Yusuf Khān	Inlayer	Delhi	600/-
15. Chhotelāl	Inlayer	Multan	600/-
16. Jhumar Lāl	Inlayer	Multan	600/-
17. Abdul Ghaffār	Calligrapher	Multan	600/-
18. Wahāb Khān	Calligrapher	Persia	600/-
19. Amīr 'Alī	Gultarāsh	Multan	600/-
20. Muḥamad Sajjād	Mason	Balkh	550/-
21. Ismāil Āfandi	Dome-maker	Turkey	500/-
22. Muḥammad Khān	Calligrapher	Baghdad	500/-
23. Muḥammad Siddiq	Mason	Delhi	500/-
24. Atā Muḥammad	Sculptor	Bokhara	500/-
25. Abu Yusuf	Inlayer	Delhi	500/-
26. Abu Turāb Khān	Mason	Multan	500/-
27. Shakrullah	Gultarāsh	Multan	475/-
28. Raushan Khān	Calligrapher	Syria	400/-
29. Sheojilāl	Inlayer	Multan	342/-
30. Manohardās	Inlayer	Multan	295/-
31. Kāzim Khān	Kalash-maker	Lahore	295/-
32. Mādhorām	Inlayer	Lahore	273/-
33. Chintāman	Inlayer	Multan	252/-
34. Bansidhar	Inlayer	Multan	244/-
35. Hīrāman	Inlayer	Multan	234/-
36. Manohar Singh	Inlayer	Lahore	200/-
37. Mohanlal	Inlayer	Kannauj	200/-

Fig. 44 List of architects, calligraphers and artists who worked on the Taj Mahal in Agra, and their respective countries.

have also assumed some of his father's responsibilities as imperial architect after his sudden death before the completion of the edifice. [Figure 44]

There is also the rather interesting mention of the "Bayaz-i Khushbui"- a mid-seventeenth-century household manual in Shahjahanabad, which contained an entire section on sizes, plans and models for commonly-used buildings and gardens.¹⁰⁴ This meant that a sizable portion of the population of the sovereign city, at least the Mughal aristocracy, was largely familiar with certain standard notions of space-making (obviously Timurid) which family architects would translate into buildings.

3.3 Mass Population Movements

The mass exodus of migrating populations was another interesting factor contributing towards this process of cross-cultural exchange between the Timurids and Mughals. Entire social sub-groups or tribes migrated from one place to another, in response either to the perennial needs of new pasture lands and new oasis sites; or for reasons of trade and occupations, and frequently in response to the political persecutions. Since the reign of Timur, and even in the reigns of his late successors, nomadic and sedentary populations had been habitually and often deliberately inter-mingled, in order to create a more homogenous social milieu.¹⁰⁵

¹⁰⁴. Habib, Irfan. *The Agrarian System of Mughal India: 1556 - 1707 AD.*, pp. 421. Blake refers to two manuscripts in this respect; *The Bayaz-i Khushbui*, Persian Manuscript Collection, Ethe 2784, India Office Library, Fols. 108a - 11a/ and Jagat Rai's, *Farhang-i Kardani*, Abdus Salam Collection, no. 315, Maulana Azad Library, AMU, Vols. 15b - 16.

¹⁰⁵. Beatrice Manz, *Op. Cit.* "....With the rapid acquisition of new regions after 1209 AD, Chinggis had to control an ever growing dominion of varied population from Turkic and Mongolian nomads to the settled populations of Iran and Northern China. In order to accomplish this he developed a system which moved individuals and frequently entire populations thousands of miles from their place of origin; thereby settling Persians in China and nomads deep in settled territories. In the cities of the conquered regions he stationed military governors, mostly of Inner Asian provenance, with Mongol militias. As if to further secure unity and control within his realm he garrisoned the settled regions with separate elite units (*tamma*) drawn usually from a number of different tribes and areas and representing the whole of his army. At the same time, Chinggis made good use of the expertise of Chinese and Iranian bureaucrats in the administration of his realm: and a few of these men actually rose to positions of great power over regions far away from their native lands and wielded influence in the central administration. In this unique way he began opening of horizons and the mixing of sedentary and nomad populations which wrought a profound change in the social structure of Eurasia during the Mongol period...." pp. 14.

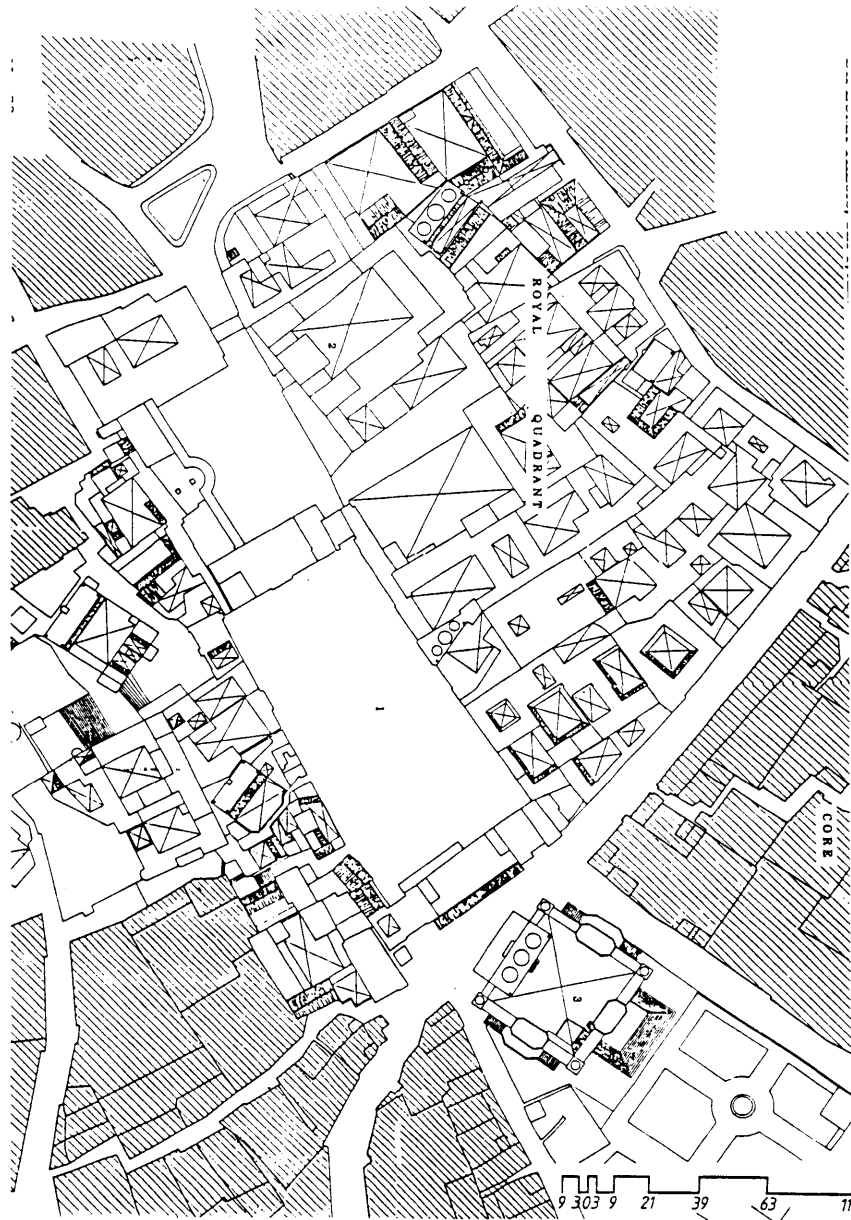


Fig. 45 Bhopal city, Central India. Part of the residential sector in which were settled the foreign/ Pathan migrants.

Analogous to the effect large modern cities today have on the surrounding regions; the large urban centers of the Mughal empire served as literal containers attracting large populations of rural people from the near hinterlands of these cities, who came in search of employment, service and business. More significantly, a sizable percentage of migrants also arrived from seemingly distant locations beyond the north-western frontiers, namely the areas of Afghanistan, Central Asia and Eastern Iran. They reached destinations such as Lahore, Agra, Shahjahanabad and others in order to gain employment at the court, within the royal encampment or to join the ranks of the Mughal army.

This third purpose for migrations to occur was perhaps the most significant since it brought in very large numbers of 'foreign' populations into the general structure of the city. This practice was greatly encouraged in the era of the Mughals, mainly in response to the perpetual needs of the imperial army to hire armed, trained mercenaries in order to swell their ranks.¹⁰⁶ Therefore entire villages and qasbahs of homogenous populations were sometimes moved, usually consisting of families affiliated by ethnic or clan origins; across large geographical distances between parts of Khorasan and Central Asia to the larger urban centers of the Mughal domain.¹⁰⁷ Thereafter the adult men from these numbers joined the armed ranks, while the remaining population settled down and established themselves, in ways remarkably similar to their original habitats. It is this retention or preservation of their social structure which required a particular/ familiar physical definition, and of which their original homelands were an ample precedent. Therefore there exists a marked similarity in the physical make-up of the residential sectors in these cities, to an extent where neighborhood institutions, house types and urban spaces seem familiar.

A more detailed research on individual examples of cities would invariably yield more information in this direction, which is beyond the present scope of this study. However, one case shall be briefly cited here in order to illustrate the extent to which these 'foreign populations' influence urban form within the city. The city of Bhopal, located in Central India, was established by the Mirazai Khail tribe of Pashtu Pathans from the Jalalabad district in Afghanistan in 1707. Their

¹⁰⁶. William Irvine, *Op. Cit.*, pp. 36 - 44. Also see Rita Joshi, *Op. Cit.*, pp. 1 - 20 and pp. 184 - 197.

¹⁰⁷. *Ibid*, pp. 5 - 20.

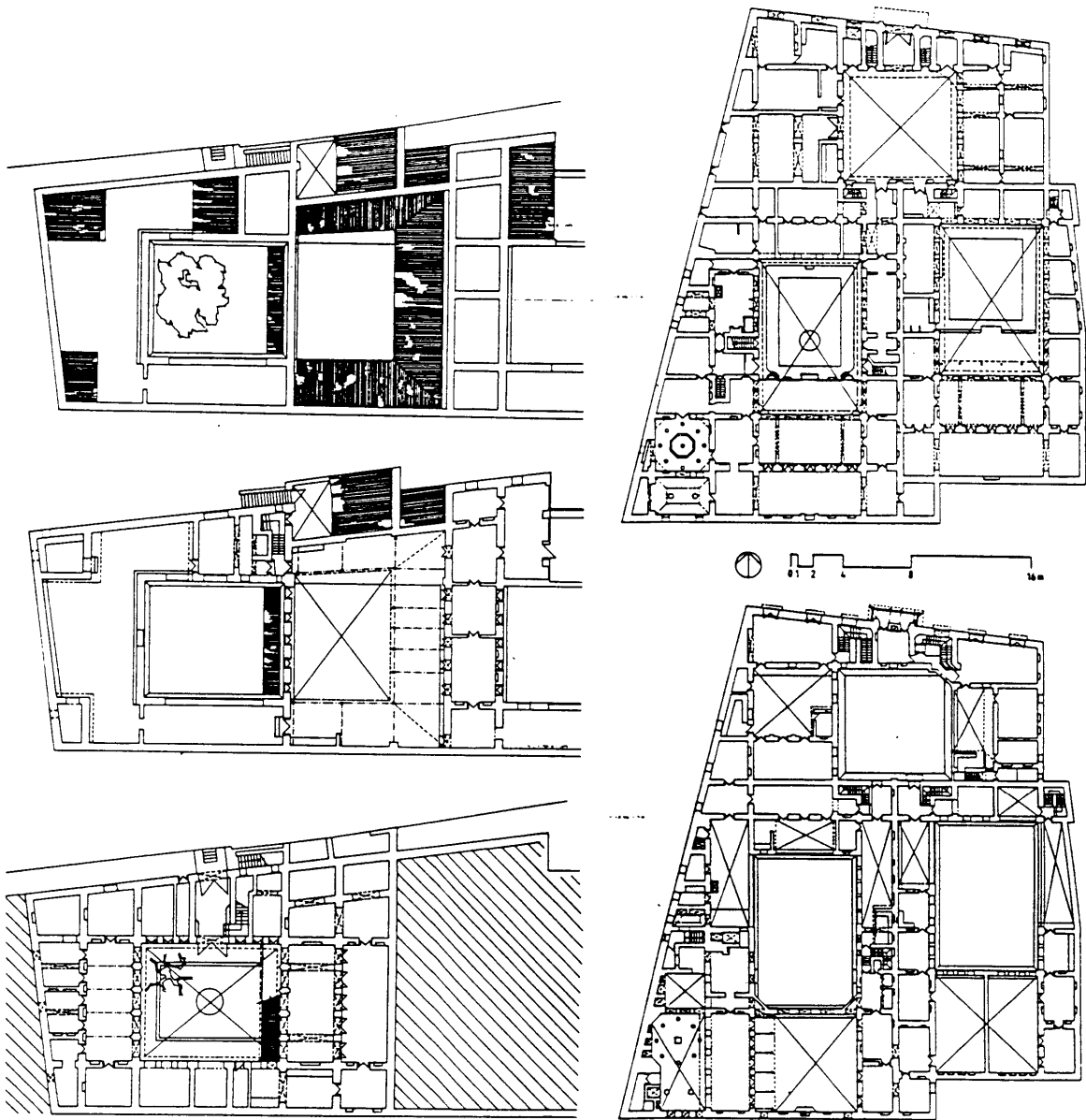


Fig. 46 Nawabi Mansion in Bhopal, case 1
 Fig. 47 Nawabi Mansion in Bhopal, case 2

leader Sardar Dost Mohammed Khan was essentially a deserter from the Mughal army, soon after the death emperor Aurangzeb in 1707. Subsequently Dost Muhammad moved to the Malwa region and established Bhopal on a pre-existing urban foundation. Significantly over the years, larger groups of pathans were brought in from the native Jalalabad to be recruited in the state army. Interestingly, this portion of the urban population, who were also the societal elites, retained their nomadic characteristics even till recent date. Most occupied a certain sector/ mohalla within the urban fabric of the city of Bhopal, which is seen to have clear variations in terms of its formal and spatial characteristics when compared to the other residential sectors within the same city. More precisely, the Afghan or Pathan mohallas display a house type that seems a clear 'foreign import' into the region.¹⁰⁸ [Figure 45, 46, 47]

It may also be significant to mention here the procedure or mode of recruitment in the Mughal Army, which in some way actually promoted more Persians, Khorasanians, Samarqandis and Afghans to join the ranks. Single men who resorted to the Court in the hope of obtaining employment in the army, were first obliged to seek a suitable patron, such as an Amir or a beglik (beg), generally from his own country, ethnicity, clan or race. Therefore Mughals became the followers of Mughals, Persians recruited with Persians, Afghans with fellow countrymen, and Khorasanis with their specific Amirs. There seem to have been certain customary rules dictating this process and one of them is specific to our interest, which says that..... that a noble from Mawarunnahr was allowed to recruit none but Mughals; if from Iran, he may have one third Mughals and the rest as Sayyads or Sheikhs; or if he took Afghans and Rajputs, of the former he may enlist one-sixth and of the latter one-seventh of the total number of his men. Similarly, nobles who were Sayyads or Sheikhs might enroll their own tribe, and Afghans upto one-sixth of their total strength. Afghans themselves might have one half Afghans, and the other half composed of Mughals and Sheikhzadahs. Rajputs could recruit all Rajputs if they so desired. At times men of high rank who desired to increase their forces, would remit large sums of money to the country with which they were especially connected, either in terms of ethnic origins of home land, and thereby induce armed recruits of a particular class to flock to their standard.

¹⁰⁸. Manu Sobti, *Urban Form and Space...*, pp. 71 - 72.

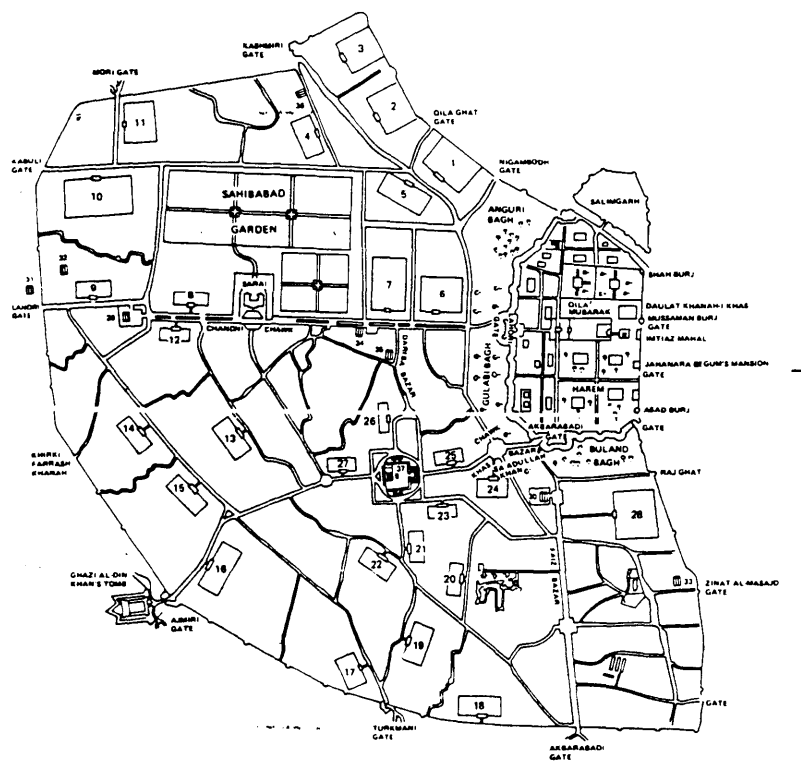


Fig. 48 Amiri Mansions in Shahjahanabad in 1739.

In terms of physical structure, therefore the begs or amir would establish his own residence in the middle of a settlement or at a vantage position, and the rest of his followers or retainers would begin to cluster around him. [Figure 48] The town of Shahjahanpur (in present-day western Uttar Pradesh, India), for example came about as a result of an initial foundation initiated in the reign of Shahjahan, whereby he awarded fourteen villages in addition to the jagir to two Afghan brothers, Dilir Khan and Bahadur Khan. On imperial orders a strong fort was constructed to defend the town and the two mohallas of Dilirganj and Bahadurganj formed the nucleus of the town, partly settled by relocated Afghan inhabitants who were brought from beyond the Indus, according to their native tribal and clan affiliations.¹⁰⁹ Comparable examples of urban foundations from the same period and beyond are Muzaffarnagar - founded by Muzaffar Khan-i Khanan around 1633, Muradabad - founded by Rustam Khan Deccani and named after Prince Murad Bakhsh, Farrukhabad - founded in 1714 by Muhammad Khan Bangash and named in the honor of Emperor Farrukhsiyar¹¹⁰; Ghaziabad - founded by Ghazi-al-Din 'Imad al-Mulk, Najibabad - founded by Najib al-Dawla around 1755; Faizabad - which owed its rapid growth and prosperity to the patronage of Safdar Jung and Shuja`al-Dawla, and Rampur - founded in 1775 by Faizullah Khan.¹¹¹

As in the case mentioned here, in most of these settlements or foundations, the urban populace comprised mostly of people who had been forcibly transferred from another part of the country, and this would have been the case at the conclusion of a successful campaign or the suppression of an internal revolt. The granting of favorable terms to immigrants and foreigners during the initial years of the settlement must have encouraged populations to gradually drift away from the countryside and be attracted to the larger towns which functioned as literal urban magnets for such rural people. In the northern Gangetic plain, (now

¹⁰⁹. Neville, H. R. *District Gazetteers of the United Provinces of Agra and Oudh*, Vol. XVII, pp. 135 - 7.

¹¹⁰. Here Bangash first built a palace fortress in the middle of the walled area, then erected large walled mansions (of the likes of Shahjahanabad) for each of his 32 sons/the merchants, artisans, laborers and artists who were unattached to any of the great households lived in caste/ craft mohallas in the middle of the area..... See Blake, pp. 71, quoting Muhammad Wali, "Tarikh-i Farrukhabad," fols. 3a - 4a.}.

¹¹¹. Hambly, Gavin. "Towns and Cities: Mughal India", *The Cambridge Economic History of India*, Tapan Raychaudhuri and Irfan Habib (Eds.), Vol. 1, pp. 443. Also see Manu Sobti, *Urban Form and Space in the Islamic City* and Shalini Saran, "Rampur: Pleasure Ground of the Rohillas", in *The India Magazine*, Vol. 5, No. 7, June 1985, pp. 20 - 32.

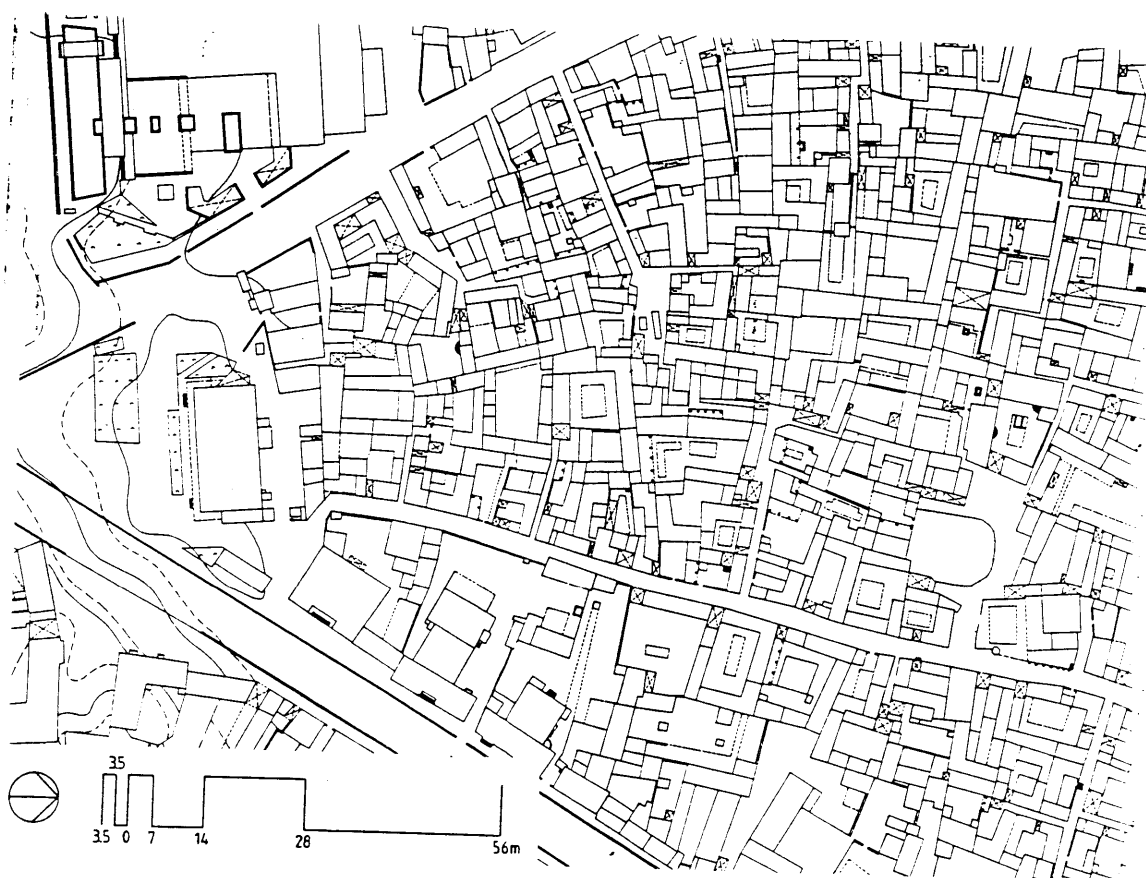


Fig. 49 Samarkand, plan of part of the old city showing homogenous residential fabric interspersed with large monuments.

Uttar Pradesh, India) for instance, there was a long-established tradition of recruiting immigrants from beyond the north-western frontiers of the Mughal empire, as in the case of Afghans brought to Shahjahanpur by Bahadur Khan, and of other of their fellow- countrymen brought to Farrukhabad by Muhammad Khan Bangash. Similarly an inscription from the city of Burhanpur, an important trade-commerce center in the Mughal period, records how a certain Hajji Sadr Shah came from Bukhara to the Delhi region during the reign of Aurangzeb and populated with his followers the two villages of Sadrpur and Shahpur in Shakarpur pargana, in the vicinity of Shahjahanabad.¹¹² [Figure 49, 50, 51]

¹¹². Quoted from Rahim, S. A. 'Inscriptions of Akbar and Jahangir from Madhya Pradesh', in *Epigraphia Indica*, pp. 77 - 9; by Hambly, Gavin. *Ibid*, pp. 444.

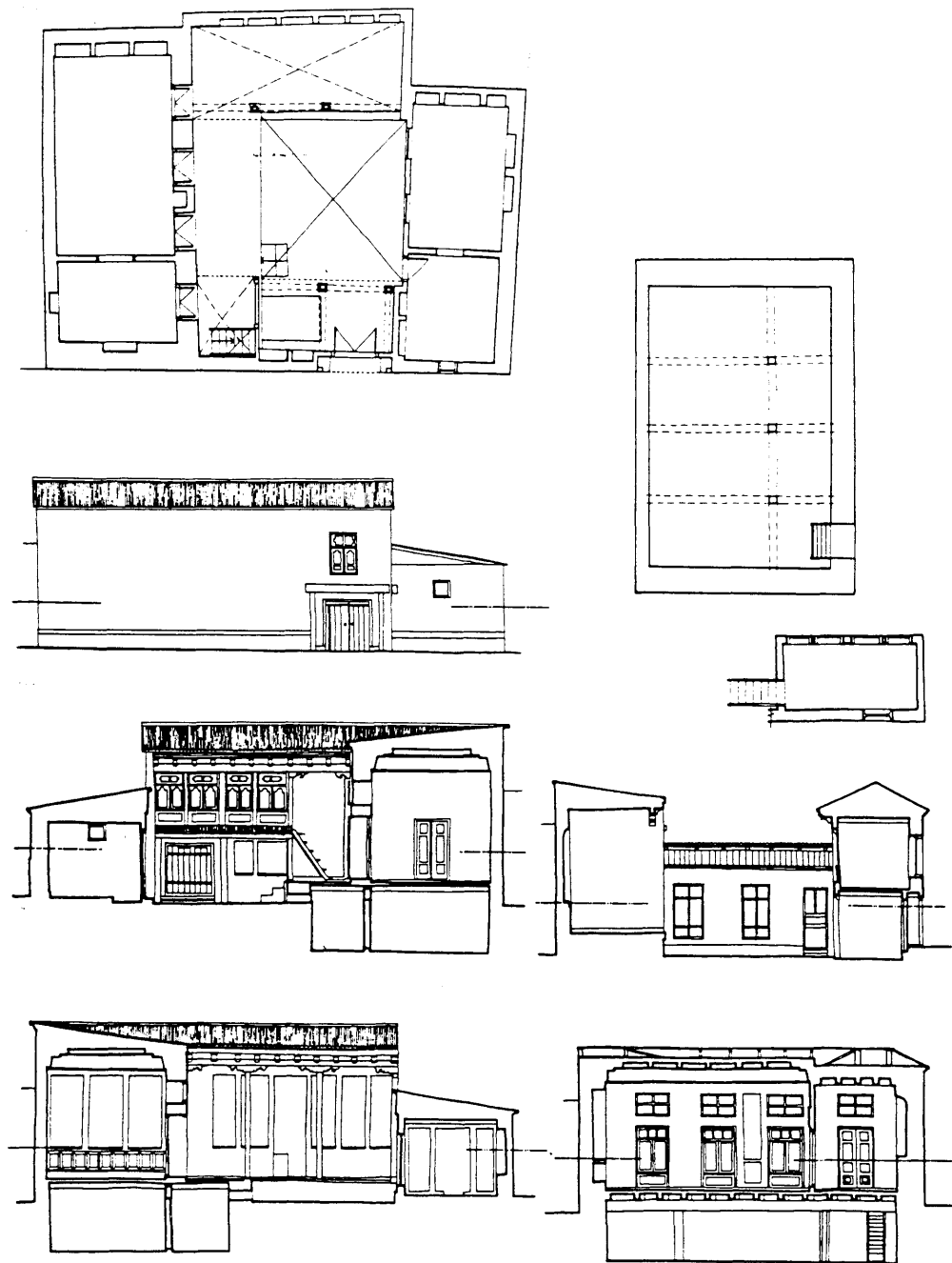


Fig. 50 Typical residential unit within shahrestan of Samarqand city, case 1

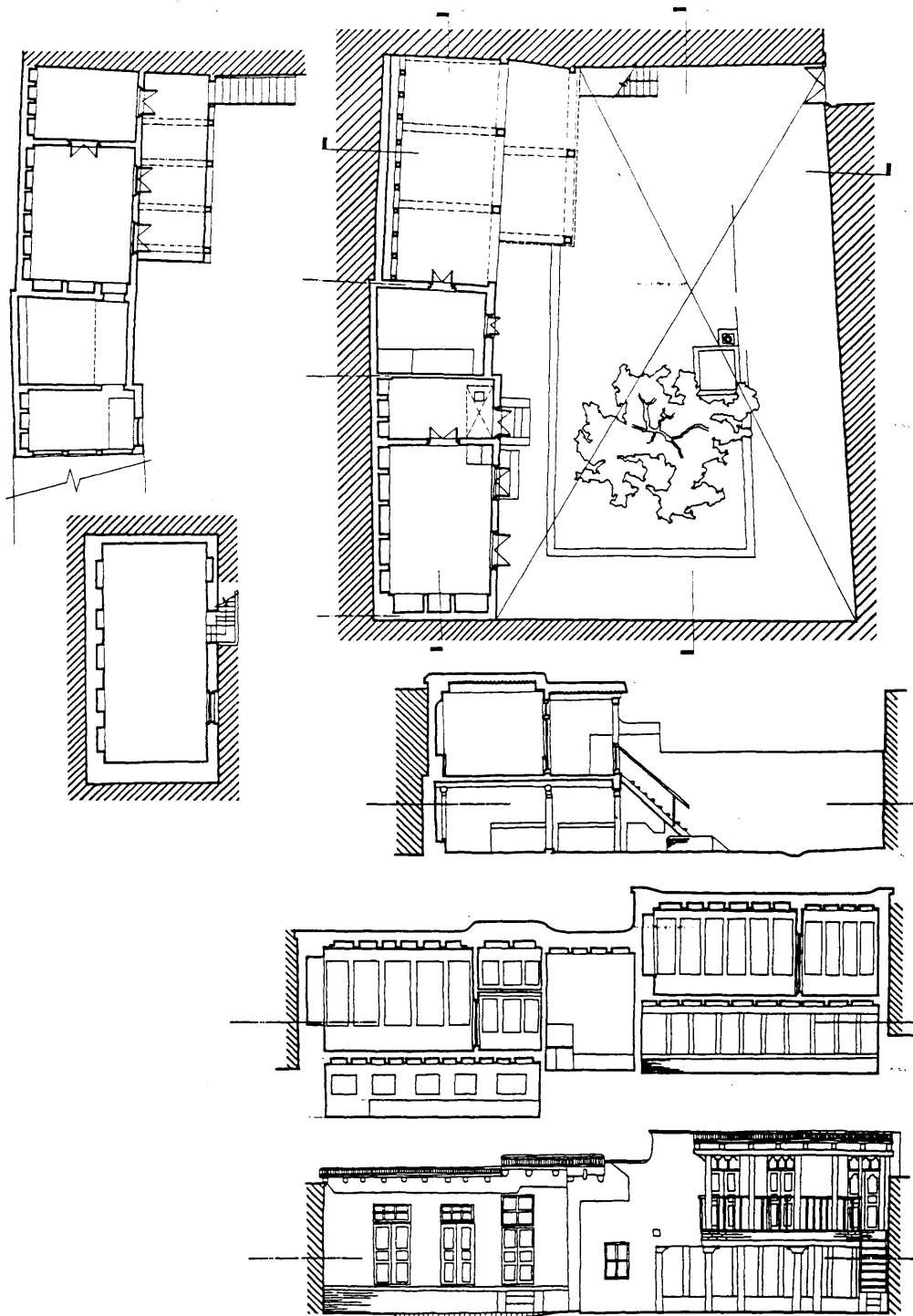


Fig. 51 Typical residential unit within shahrestan of Samarqand city, case 2

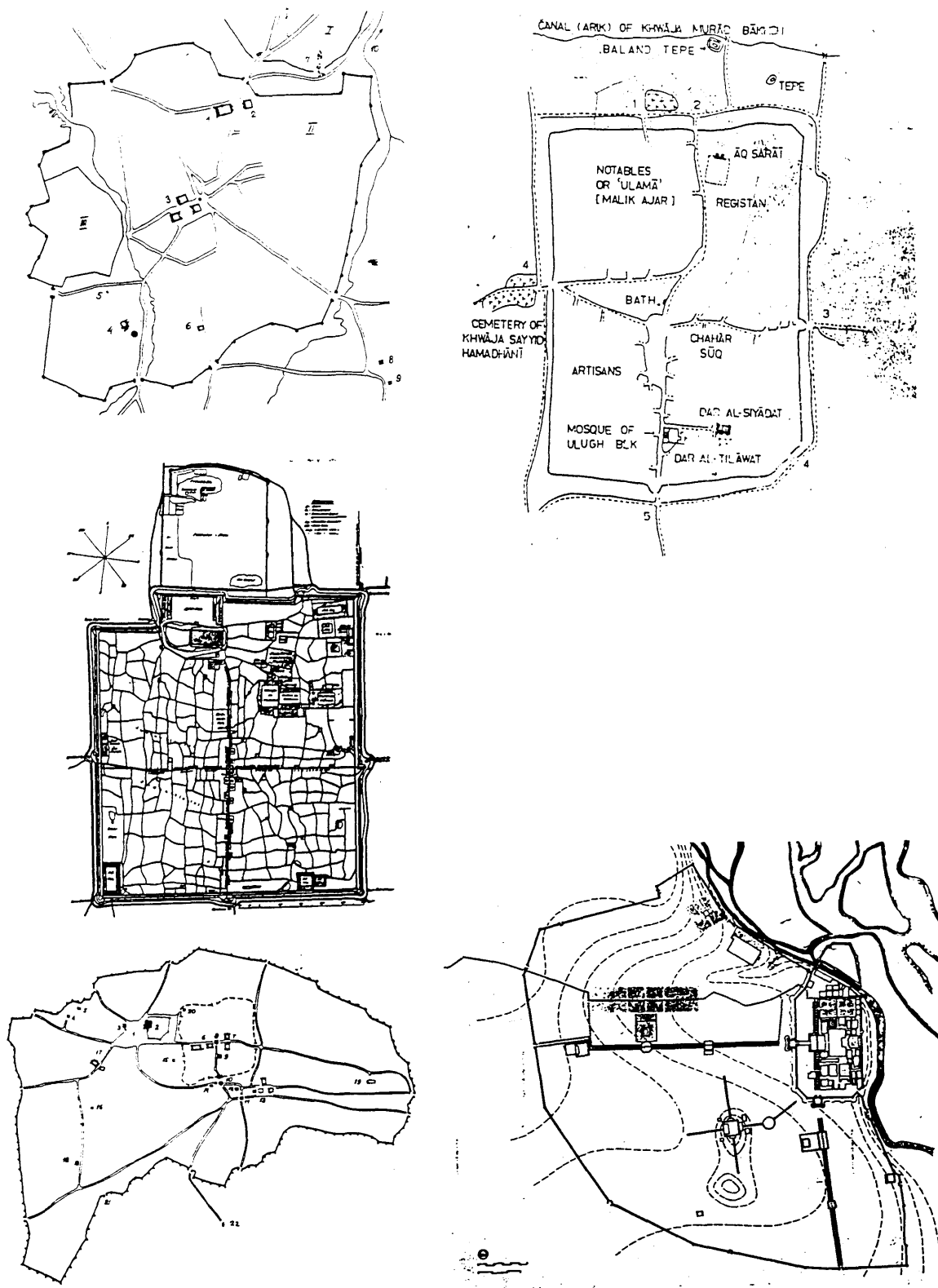


Fig. 52 Timurid and Mughal urban centers showing citadel, Shahrestan and suburbs. Samarqand, Shahr-i Sabz, Herat, Lahore, Shahjahanabad, Agra, Fatehpur Sikri.

CONCLUSIONS

The correlations evident between the Timurid and the Mughal city point towards certain obvious conclusions, some of which were in fact used as assumptions to begin this process of investigation.

1. Foremost of all there seems to have existed in all possibility the notion of the Timurid Urban Model, perceived in terms of precise definitions of formal and spatial properties of the urban structure. It had its beginnings in the Mongol encampment-capital at Karakorum, Khubilai Khan's Dadu and Oljeitu's Sultaniyya; and reached its ultimate level of sophistication and complexity in the development of the cities of Samarqand, Shahr-i Sabz and Herat, under the Timurids between 1360 and 1500. Even after the demise of the last of the Timurids themselves, it retained popularity in large parts of Central Asia, Transoxania and was used by the Uzbeks and the Shaibanids who appropriated the same territories. Thereafter in the first quarter of the 16th century the model seems to have traveled to India to create the numerous urban centers of Mughal India.

Interestingly enough, a little more than a full century actually separated the last of the real Timurids from the newly-created Mughals in the Indian subcontinent. Could the notion of the model have really preserved so long? Examining this question a little further one finds that inspite of the commonality or similarity of design elements and spatial types which exist in all the above mentioned cases, there is no physical character/ or set of characters, which can precisely be labeled as 'Timurid' per se. What this actually means is that there were obviously some other sets of parameters which would have defined 'Timurid-ness' in the urban context.

Timur's conception of himself as the omnipotent, autocratic ruler of the vast universal empire; is helpful in defining these parameters as the political hierarchy and the social structure within the Timurid state. Even a cursory investigation of urban settlements, which developed subsequent to the Timurids, reveal that all cases retained fidelity to original ideal of the emperor and his amirs as the heads of state and its social structure. Was it then possible that the definition of physical space was synonymous with the existence of a certain kind of power structure in the Timurid and Mughal city? Timurid-ness or the inspiration gained from Timurid precedents therefore was more a function of political and social structure, than physical structure.

The urban model imbibes within it four characteristics which modify the formal and spatial nature of each case. These are:

- The interaction of nomadic and sedentary lifestyles
- The incorporation of elements of nature within the urban fabric of the city.
- The tripartite subdivisions of the city into concentric zones or parts; namely the innermost citadel or qala,

the intermediate shahrestan or inner city and the outer estates or suburbs.

- The distinct differentiation between formal structure of the city established by the emperor and his amirs; and the secondary structure, which develops as a result of the needs of the secondary, or non-imperial populace.

2. The second conclusion, which immediately relates to the stand taken in the first point, states that populations deriving from common ethnic and cultural origins conceive physical space in similar ways when placed in foreign environments.

Here we must extend our discussion to include the next logical part of this research, which the author is currently engaged in. This is the investigation of residential sectors and house types in the region of Timurid Central Asia and Mughal India, which appear similar in their form and spatial organization. It is the authors' contention that if conceptions of political structure and related requirements of formal spaces 'travel' as elements of memory from one place to the other with the elite of the Timurid social strata; so would aspects of social structure, neighborhood-affiliations, and clan loyalty become vital issues for the non-elite portion of the urban populace. This would mean that physical structure of residential sectors in the city can be used an index of the ethnic origins of their inhabitants.

The assumption has been found to be true to a fairly large extent in urban centers of the Indian subcontinent. In the city of Bhopal for instance, the elite army commanders from Afghanistan, accompanied the Nawabs on their war campaigns and were initially thought to be far too uncivilized to stay within the confines of the inner city or the Shahr-i Khas. Eventually however, they concentrated in

certain areas of the city, as against the predominantly Hindu portion of the populace who chose other areas. A recent analysis of the Muslim/Pathan and the Hindu mohallas shows that not only were there clear differences in the way these mohallas are organized, but also in the manner the Muslim house type varied from its Hindu counterpart.

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